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# THE MEDICAL JOURNAL OF AUSTRALIA

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## Table of Contents

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ORIGINAL ARTICLES—		PAGE.	BRITISH MEDICAL ASSOCIATION NEWS—		PAGE.
An Address: Doctors and Specialists and the Common Weal, by M. GRAHAM SUTTON, M.B., Ch.M., F.R.C.S., F.R.A.C.S. . . . .	1		Annual Meeting . . . . .	26	
The Relationship of Vitamins to Normal Health, by MARK L. MITCHELL . . . . .	7		Scientific . . . . .	36	
The Reactions of 350 Children to Diphtheria Anatoxin, by A. A. MERRITT . . . . .	14		Nominations and Elections . . . . .	36	
<b>REPORTS OF CASES—</b>			<b>CORRESPONDENCE—</b>		
A Severe Form of Tetania Parathyreopriva Treated with Collip's Parathyroid Extract, by J. D. HERLIHY, M.B., Ch.M. . . . .	17		Fire-Walking . . . . .	36	
Anuria Following Appendicectomy, by P. L. HIPSLEY, M.D., F.R.A.C.S. . . . .	19		Clinical Observation on Blood Pressure . . . . .	37	
<b>REVIEWS—</b>			X Ray Treatment of Acne . . . . .	37	
Children's Diseases . . . . .	19		Antral Infection of Dental Origin . . . . .	37	
A Book for Prospective Mothers . . . . .	20		Double Ectopic Pregnancy . . . . .	38	
A Text Book in Physiology . . . . .	20		Treatment by Olive Oil Emulsion . . . . .	38	
<b>NOTES ON BOOKS, CURRENT JOURNALS AND NEW APPLIANCES—</b>			An Intermediate Ophthalmic Service . . . . .	39	
The Proceedings of the Medico-Legal Society of Victoria . . . . .	20		<b>OBITUARY—</b>		
<b>LEADING ARTICLES—</b>			Johnstone Simon Thwaites . . . . .	39	
The Social Aspects of Medicine . . . . .	21		William George Herbert Tregear . . . . .	39	
<b>CURRENT COMMENT—</b>			Walter Leslie Davies . . . . .	39	
The Condition of the Stomach in Pernicious Anæmia . . . . .	22		<b>UNIVERSITY INTELLIGENCE—</b>		
Asthma and Sinusitis . . . . .	23		The University of Melbourne . . . . .	39	
<b>ABSTRACTS FROM CURRENT MEDICAL LITERATURE—</b>			<b>ANALYTICAL DEPARTMENT—</b>		
Radiology . . . . .	24		"Hermesetas" . . . . .	39	
Physical Therapy . . . . .	25		<b>HONOURS—</b>		
			New Year Honours . . . . .	40	
			<b>BOOKS RECEIVED . . . . .</b>		
			<b>MEDICAL APPOINTMENTS . . . . .</b>		
			<b>MEDICAL APPOINTMENTS VACANT, ETC. . . . .</b>		
			<b>MEDICAL APPOINTMENTS: IMPORTANT NOTICE . . . . .</b>		
			<b>EDITORIAL NOTICES . . . . .</b>		

### An Address.<sup>1</sup>

#### DOCTORS AND SPECIALISTS AND THE COMMON WEAL.

By M. GRAHAM SUTTON, M.B., Ch.M. (Sydney),  
F.R.C.S. (Edinburgh), F.R.A.C.S.,

*President of the Queensland Branch of the British Medical Association.*

I HAVE first of all to express my very great appreciation of the honour you have conferred upon me by making me the President of the Queensland Branch of the British Medical Association, a position in which I shall endeavour to uphold the honourable traditions of our Association and to emulate the example of willing service which has always characterized the work of my predecessors in that high office.

<sup>1</sup> Read at the annual meeting of the Queensland Branch of the British Medical Association on December 13, 1935.

Incidentally I am the last of the signatories to the Memorandum and Articles of Association of our Branch to pass the presidential chair, and little did I dream then that in ten years I should be called upon to preside over you.

I have grave doubts as to my ability to perform at all adequately the functions of this distinguished office, and would not have had the courage to accept it had I not felt confident that you would accord me a full measure of goodwill. It is my earnest hope that the event will not prove my colleagues' generosity has absolutely obscured their judgement. However, being privileged to address you on this occasion, I have chosen as my text "Doctors and Specialists and the Common Weal", since it is my conviction that an address should be on a subject germane to the objects or work of the Association as such, or at least should have a distinct bearing on them.

In this address I shall have something to say *seriatim* on the Association itself, the general practitioner, the specialist, and the common weal, and I crave your indulgence.

### The British Medical Association.

As individuals of an old and honoured profession it may be fairly said that we undoubtedly have the confidence of the people, despite the fact that a certain type of individual with soured soul hurls indiscriminately unfair criticisms at doctors as a class. But what of our professional organization, to wit our Branch of the British Medical Association, or any other Branch in Australia for that matter?

Why are we respected almost to the point of embarrassment as individuals, and mistrusted and viewed with prejudice as an organized body in the community—a community of organized bodies in fact? Why are we dubbed a union and criticized as selfish in our perspective and our demeanour?

There is no doubt we are one of the strongest and most extensively organized unions in the world, but we are certainly not a union in the modern trade union sense. Rather are we in the nature of a guild for mutual protection and support in the carrying out of our main objects, which may be very simply stated as the promotion of the medical and allied sciences and the maintenance of the liberties, rights and traditions of our profession. That is to say our main object is to promote science. Science in so far as it is applicable to medicine it is our aim and object to apply honourably, while maintaining the interests of the medical profession, not of the British Medical Association mark you.

The interests of any organization formed by the individuals of a legitimate cult, profession or calling are naturally self-preservation and betterment. There is nothing derogatory in that. Moreover, the rules of our Association operate primarily for the well-being and protection of the sick themselves, and many of our activities as an organized body are directed towards the public weal and for the prevention of disease.

Nevertheless there are certain reasons why we are adversely criticized, and it might be profitable to examine them. The first of these reasons is undoubtedly ignorance, I think, ignorance of our canons and the prevalent notion that we expect every practitioner to practise according to a fixed pattern and that we impose irksome conditions on members to this end.

Perhaps we as an association are to blame for the prevalence of this notion because of our reticence. May be we have hidden our light under a bushel too long. However this may be, we go no further than to demand that every practitioner of the healing science shall have received adequate training in fundamental medical knowledge and shall then be free to obey the dictates of his conscience so long as he observes the common decencies of ordered society within the law.

Even granted this, the question has often been asked: "What good is the Association to the individual member of it in the practice of his profession?" Surely it may be truly said that the amount of benefit to be derived by the member is to be measured by the energy and support he himself gives to his Association. This is true of any society. But there is more to it than that. His enthusiastic

support will rebound upon himself in maintaining the standard of service he is able to give to the public—his patients. In fact, to him belongs the final reward of service, which is the increased opportunity for service, and opportunity is indeed a fine thing.

Another criticism is that many of our disputes have been financial. Unfortunately we are not fairies and must live, and all we ask is just remuneration, as professional remunerations go, for the responsibility and service we undertake. Every labourer is worthy of his hire. Happily all these disputes have ended in an amicable settlement and have brought about a better understanding between the parties.

And lastly, the idea is abroad that the Association or profession holds itself aloof from questions that effect social groups or society in general and which ultimately determine general welfare and happiness. While there is an element of truth in this, as an abstract statement it needs qualification. It is to be remembered as medical practitioners we are from the very nature of our work intensely individualistic. Our relationship to our patients, and even the patients themselves by the intimacy of their "business", foster this trait. It is this fact, coupled with the natural diffidence of one with scientific training to dogmatize upon problems that may be open to difference of interpretation, that militates against leadership and unanimous action in public by the profession.

Nevertheless medicine is fast becoming a social service as well as a clinical science, and there is a great deal to be said for the cooperation of the profession in the solution of the problems that arise in these questions. Many of the questions, however, are of such a nature that we could not give a lead or even make a pronouncement singly, but require the cooperation of other professions and bodies, for example the lawyers in the question of abortion, the State in the questions of birth control, the drink problem and so on, while others such as food problems we might sponsor. In this respect the Branches in Australia are lagging behind the Parent Body and the American Medical Association, who have a Nutritional Committee and a Committee on Foods respectively which are investigating the relationships of nutrition to disease and so on. At any rate the Association is always perfectly willing to interest itself in the medical aspect of these questions and to contribute expert medical assistance and evidence to any body of inquiry which may be set up by competent authority from time to time. As a matter of fact, although it is not set down in our Articles, it has become one of the aims of the British Medical Association to place its collective services readily and effectively at the disposal of the State.

If these things are as they should be, and we believe they are, what can be done to remove the disability we observe? Our influence in the community is directly proportional to our ability to direct public opinion. If one wishes to bring about a reform, one has first of all to gain the confidence of the public and to mould its trend of thought to conform to one's ideas. One has to create a public



interest and opinion in the matter. Unless we make our objects generally known and by public appeal, sheer merit and genuine service win public esteem, we shall get nowhere. We shall not function properly, but simply exist, and not only do we risk a further fall from grace, but we are failing to carry out our mission as a British institution. It was Disraeli who said "Individuals may form communities, but institutions alone can create a nation".

Since the prestige of our members is so intimately bound up, not only with the success of our Association in its corporate effort to apply medical science and to be of real service to the public and the State, but also with the esteem in which it is held by them, it seems strange that we should not have taken more steps to enlighten the public by the simple expedient of collective appeal.

The public might be wisely and helpfully informed of our work, our aims and our standards and not allowed to find them out as best they may. There is one organization which is preeminent in its adoption of this attitude, and that is the American College of Surgeons. Even in our own State the Queensland Cancer Trust has advertised ethically on behalf of the legally qualified medical practitioner without injuring our dignity or our prestige and with benefit to the public. Should not something more be done along similar lines with reference to other diseases than cancer, conditions for which more can be achieved and which are just as important from the point of view of the public health and just as often the happy hunting ground of the quack and the charlatan?

Again we have resorted to public appeal in our advocacy for the reestablishment of the Institute of Hygiene and Tropical Health in the actual terrain of tropical diseases either at Townsville or Cairns. This question will doubtless be taken up by the Queensland Medical School. But on the whole one would suggest that the profession has adopted a *laissez-faire* attitude, and one might even say is out of date in the view it takes of public propaganda. There is no need to stress the fact that this is the instrument of the age we live in, and there can be no very serious objection to it so long as it is not calculated to deceive. It is, in fact, a perfectly legitimate method of telling the public what it should know or do in certain circumstances and what to avoid.

Surely the broadcasting of suitable instructive medical lectures and the publication of authoritative articles in the Press, sponsored by our Branch and editorially controlled by a publicity committee formed from among its members and the members of our council, would be worth while. It is our duty to make the people acquainted with essential health facts, and it is important that they should be educated to seek early qualified medical advice in ill health and disease, and indirectly an object of our Association. The institution of Health Week, in which our Association cooperates, is a commendable step in this direction. If the public is taken into the confidence of the profession at these meetings, where sensible talks and the results of research are given by leaders in the profession, there will be

inculcated a better feeling and understanding between us. The enthusiastic cooperation of the Press, of all societies interested in civic betterment and of municipal and State officers, together with members of our own Association, will insure that authentic information is presented in an understandable and practical way.

Stated in a few words the position is this: Individual advertising is abhorrent to us and not calculated to be in the best interests of the public or the profession. The genuine medical practitioner does not seize upon a likely patient and proffer advice, but is sought by the patient and offers advice only when asked for it. On the other hand collective appeal is permissible, even desirable, if we are to give a service which is efficient and sufficient. In this regard it is the bond of communication which makes an organization democratic in its nature and effective in its work.

#### The General Practitioner.

Let us now pass on from a consideration of our Association to that of the members of it.

Since one has often heard it said that the general practitioner is becoming old-fashioned and that specialism is the order of the day, it may be worth while to discourse briefly on these two categories of medical practice.

In the first place there is no doubt in the world—England, the Continent, and America—that the need for the services that the general practitioner can offer is still present, despite the specialist, the clinic or the government institution, although in a slightly altered way. And secondly, it is apparent that the general practitioner must adapt himself to the changed state of medical practice and the growth of medical knowledge.

Thirdly, the profession in clinical practice must realize, if it wishes to compete in medicine today, that it must give service—personal service with the humanitarian and sympathetic touch in it, combined with ordinary business courtesy and elementary business methods as far as compatible. It must be prepared to give collateral service which is attractive in itself. Mutual cooperation is necessary for this, and group practice and partnerships will implement it.

One cannot see that any scheme of medical insurance, voluntary or national, will entirely solve the problem for the individual practitioner any more than it has in England. He will have divine help, the incentive of success, if he will help himself.

In the ordinary way, when a person falls ill, there are only three classes of people who could reasonably be expected to advise him what to do for the best, namely, the nurse, the pharmacist and the medical practitioner.

While the two former by virtue of their training and their work on the fringe of the medical profession often give quite sound advice, they are not qualified to advise in these matters, but having been asked, endeavour to oblige, and at best can make only a shrewd guess. It is the general practitioner, then, whose prerogative it is to advise patients, not only as to the nature and treatment of those of their

ailments as lie within his power, but also to advise when the nature of their troubles demands the services of a medical colleague.

There is no doubt about the qualities of the general practitioner, by and large as a class, in his own sphere. He is an indispensable part in the community as much in the town as in the country. He has specialists available to him, and he formulates an idea of what is necessary to be done and often seeks the advice of these gentlemen, leaving the detail in their hands when occasion demands.

Nor does this preclude cooperation and amicable reciprocation with the pharmacist or the optometrist or any other of the technical professions, if one may use the term, and of allowing them the courtesy of answering questions, of offering relevant advice, or even in certain circumstances of proffering minor remedies on a limited trial, in the full knowledge that these gentlemen are fully seized with their responsibilities and as a body know where these begin and end. Such an attitude is necessary to promote that goodwill among the professions, the neglect of which will prove the undoing of all and the ultimate dissatisfaction of the great majority of people.

Still the general practitioner has an unenviable and arduous task, and, in order to fulfil this with credit to himself and his profession and with efficiency, he must have a conscientious knowledge of his own and medical man's limitations and a sound medical knowledge of what can be done for ill health and disease these days. He need not be a mystic clinician or a sage surgeon, but he must keep himself abreast of the times.

There is no reason why the general practitioner should not do much more of what can best be described as side-room pathology, in which the microscope and simple apparatus might be used to advantage and without detriment to, or any reflection on, the clinical pathologist.

Nor is there any valid objection (and now that time-payment is universal, certainly not cost) to the general practitioner or one of a group handling his own X ray machine for routine work, just as the dentist does. The modern developments in mobile and shock-proof machines and other simplifications in technique brought about by improvements in films and screens make this a practical proposition, provided certain cooperative adjustments, to be mentioned later, are made. The radiologist of today is bound to become much more specialized in the future and will lose nothing by it.

If the bulk of practitioners were to give up midwifery and use radiography and fluoroscopy, as the laity now uses the "Kodak", and were to supplement this with the use of the microscope *et cetera*, and if midwifery were divorced from general practice and possibly also from gynaecology, at all events in the larger towns, nothing but good would accrue.

A new general practitioner service might be born, embracing pre-natal and post-natal care, obstetrics together with infant feeding and welfare. Improvement in maternal morbidity and possibly mortality and in infant mortality and hygiene would be the result. "The genetic general practitioner" as he might be

styled would soon have an interesting and busy practice. There is no one more fitted for this service than the legally qualified medical practitioner, and he would be well advised to make it known that he is able and willing to give, as a collateral service to those that can afford and would prefer to pay for private attention, all that public clinics can offer. Otherwise the natural inference is that this work is being carried out by people more competent to perform it.

In addition to these readjustments not only the conscientious and prudent general practitioner, but also the specialist will admit that it is still necessary to read diligently and to attend clinical and scientific meetings and such-like educational proceedings of our profession. The various medical subjects impinge on each other, and whatever subject one is interested in, information in many collateral branches is essential if one is to preserve one's sense of proportion. Moreover, the doctor of today needs much more knowledge than his predecessor, and has to make more effort to obtain it.

In this connexion one should like to see the establishment of a bureau for the collation and circulation of medical information and an extraction service for a small fee in connexion with our now affluent MEDICAL JOURNAL OF AUSTRALIA. If knowledge is not acquired easily and maintained at a high level, the medical practitioner will lose efficiency and the medical machine will break down, with the result that the advice and service that he can so ably give will be sought further afield to the chagrin of the profession and the detriment of the public.

There is little use in bemoaning the existence of the quack or the appearance in the Press of advertisements for patent medicines and systems of sure cure or of crying out about the inroads of public clinics into private practice. A much more practical way would be to cooperate in such a way as to make these the less desirable.

The suggestions I have made may be taken for what they are worth, but there are three aspects which need to be stressed, namely diagnosis, social work and certification. This is necessary because opportunity carries with it responsibility which as brothers go ever hand in hand.

Diagnosis is the most important single practical consideration. Nowadays every doctor is cognizant of the fact that he has an important obligation to fulfil in all cases once he has accepted his engagement, and he will readily concede that practically all conditions have certain outstanding features that should be sought and that can be recognized by the diagnostician, for such he is, of any standing whatsoever.

And so it is that he who accepts a case accepts the obligation to supply a service based on an adequate diagnosis. If he cannot supply this personally, he must learn enough about the case to see that it gets adequate diagnosis and treatment at other hands. Every conscientious practitioner makes use of this time-honoured and accepted custom and retains his patient's faith and esteem thereby.

It is, however, too often forgotten that the social and economic environment of the patient is as much



the concern of the doctor as the clinical aspect of the case. No one will deny the importance of these aspects and the wisdom of sympathetic interest in and inquiry into them. Fortunately high grade medical work still permits of good social work, and this should be fostered in medical practice, since it is the gateway to "public health" medicine in private practice.

A responsibility which is perhaps not so well understood is the matter of certification. It is often regarded as an irksome procedure that interferes with clinical work and consumes valuable time. The sooner the profession dispels this idea and comes to realize the importance of the medical certificate, the better it will be for all concerned. We have been adversely criticized for our indifferent attitude towards the granting of lax certificates, and this criticism is not wholly unmerited. It is to be remembered that a medical certificate is a fundamental document in all administrative work centring round the illness or disability of an individual and is in the nature of a liaison between a medical assessor and an administrative officer or executive of some sort, and that it is an expression of opinion. For the sake of equity and professional integrity, if for no other reasons, it is incumbent that the opinion expressed be honest and correct, that is, founded on accurate medical data, since it is in the province of medicine that the condition of a disabled or sick man is diagnosed and the sick man is treated.

On occasion, however, the issuing practitioner will require certain information which he cannot ascertain owing to lack of knowledge of how to make use of the special methods of investigation which have supplemented the older clinical methods. He must, then, in the interest of all three parties concerned, call to his aid the services of the specialist. This furnishes an example of the ancillary nature of specialism, but it must be pointed out that it is not the only aspect. Enlightened democracy is far too alert for it to be otherwise, and thereby hangs a tale. This brings me to the subject of specialism.

#### Specialism.

Within the lifetime of many of those present tonight there has been a growth of medical knowledge which has been at once rapid and fundamental, and out of it has been born specialism.

Specialism, then, is a development that has arisen from within our own ranks to meet the need for concentration on special subjects. It is the logical outcome of the fact that medicine today is too vast a subject for the comprehension of a single mind, whether the possessor of that mind be the "practising physician" or the departmental or administrative medical officer. It is, in fact, the division of our scientific and practical work into sections, and it has come to stay. While the division has its advantages, it carries with it important disadvantages.

Firstly, from the point of view of our Association, it tends to promote somewhat rigid isolation of accepted special departments, with consequent dissociation and sometimes jealousy of the clique type. Secondly, from the ethical point of view it tends to the formation of specialties and special institutions, where no specialism is required. And

thirdly, it creates the difficulty of assigning a place in the already overcrowded medical curriculum for instruction in special subjects.

The first evil your Council, during the year, considered it wise to combat by making special scientific sections of the Branch partially subservient. Let me quote what the late Frank Kidd, the well-known urologist, said:

It is the duty of a specialist to study by intensive methods diseases which lie within the bounds of his specialty, but specialists should never forget that one of their most important functions is to come back at times from their study and endeavour to describe common diseases in as simple a manner as possible, so as to diffuse among practitioners the fresh knowledge that has been gained by intensive study.

With regard to the ethical objection, it is indeed difficult to dogmatize as to how we as a profession can justify one specialty and condemn another. There are, however, three essentials for an efficient specialty. The most important is that both in the matter of diagnosis and treatment it should be able to show results which surpass those to be obtained by the unspecialized practitioner, be he physician or surgeon. The next consideration should be that the group of cases which is to form the basis of the specialty should be of such a nature that they present difficulties in diagnosis, whether technical or otherwise, and demand methods of treatment which cannot be readily met by the general physician or surgeon. And lastly, the medical men professing such specialties should first have had reasonably long experience in general practice and should confine themselves reasonably to the pursuit of their specialties. This important consideration is unfortunately honoured more in the breach than in the observance, but it is nevertheless essential. It is one of those things that can be vouched for only by those who have gone through the mill, and all those who have the moulding of the teaching and practice of medicine in this State in their hands would be wise to make practical application of the principle involved.

The question of instruction in special subjects still remains a problem for the universities, but there can be no doubt that the primary duty of a medical school is to turn out general practitioners with a broad knowledge based on a sound training in scientific medicine which will enable them to treat common ailments and to recognize and to deal adequately with the obvious medical and surgical emergencies. As has already been said, specialism should be post-graduate, after some years of general practice. The Queensland Medical School is fully seized with the soundness of this view, and is about to put it into practice. It is important, too, that clinical teachers should remember that it is just as important for students to have their attention directed to the environmental and dietetic factors in disease as it is for them to be taught symptoms and signs. Sociological wisdom is just as valuable as clinical acumen. But this is not all, for the curative and the preventive sides of medicine are not wholly separable, and during his whole course the student should have impressed upon him the preventive aspect.

Meanwhile the Post-Graduate Committee, which is an autonomous body answerable to our Council,

but administering its own affairs and funds, is doing good work in promoting post-graduate study. The Royal Australasian College of Surgeons has similar ideals and activities and has embarked on the establishment of a post-graduate hospital in Melbourne—a most commendable step.

One looks forward to the day when each State will have its own post-graduate school, not only of medicine, but also of science, engineering and agriculture, affiliated with the universities. This seems to be the ultimate solution of the problem of keeping abreast of the times for those who have reached graduate status.

#### The Common Weal.

Finally there remains the question of the hour, at the moment its lateness, and in the future the correlation of the practice of doctors and specialists with the public needs.

The train of events during the last few months has led to the establishment by Executive Minute of something in the nature of a Ministry of Health with the object of promoting an ordered direction of medical services in the State. Just what form this coordinated service will take and how revolutionary it may be will not be fully known until by-laws are drawn up under the *Health Act* when it has been thrashed out in Parliament. On these depend the character that the practice of medicine may assume, and the relation that present day practice may bear to social programmes affecting medical services for the people.

It is not at all surprising that we as an association, acting in the best faith and to the best of our knowledge and belief in the better interests of both doctors and patients, should sponsor public medical services more or less on the lines of the national insurance systems in European countries.

Even in England, however, the matter is not a closed book, and in America the book is only just opened. The question then arises, as it must do from time to time: Is a wide extension of the public medical services in the best interests of all concerned? A very sound article on this topic entitled "A Case Against the Extension of Public Medical Services" by Dr. I. Johnson, in *The British Medical Journal* of September 28, 1935, is worth reading. However all this may be, it must not be lost sight of that the form which any insurance that may be adopted would take is a political matter. The success of any insurance scheme, however, centres round two important things—actuarial investigation and certification. The latter, while it is a function of the medical profession, has become, owing to its inherent difficulties and its key position, so important as almost to be a separate science.

A scheme for a general medical service for the State naturally falls into three categories, namely public health, domiciliary treatment, and hospital treatment.

The British Medical Association in England has taken the view that in any modern system of medical service it is a fundamental principle that such a service should be directed to the prevention of disease none the less than to the relieving of individual suffering. The general practitioner and the specialist

inevitably must cooperate in this work to a much greater extent than in the past, and public health medicine must expand from a relatively small group of doctors concerned with environment, sanitation and epidemic diseases into a very much larger group which in addition to these matters must be concerned both clinically and administratively with particular classes of persons and kinds of illnesses specially important from a public health point of view. With regard to the relief of suffering, granted that it is a *sine qua non*, in order that the interests of the patient and the community be protected, that the accepted standards of the medical profession, the personal relation between the patient and his personal physician and free choice of doctor, be maintained, it is none the less desirable that Peter be not robbed to pay Paul. General practice and specialism are both time honoured, and can be made to work harmoniously not only with each other, but with public health and departmental medical services. Quite appropriate to the occasion is the report of the special committee of the American Medical Association's organization (see *The Journal of the American Medical Association*, June 30, 1934, page 2200) and well worthy of consideration, since with certain alterations to suit the position as it exists in Queensland, the principles that it sets forth, with the notable exception of the first and part of the second, are capable of integration in any equitable scheme for a public medical service and should be kept in mind by those confronted with the problem.

In it appears the following words prefacing the principles set forth:

Your committee does not recommend any plan but has abstracted from the pamphlet [entitled "Sickness Insurance Problems in the U.S."] the following principles, and suggest that they be followed by all constituent bodies of the American Medical Association as bases for the conduct of any social experiments that may be contemplated by them.

It ends with the following statement:

In most communities it will be found that comparatively few changes in the methods of administering medical care will be necessary. That type of medical practice which preserves the personal relation . . . that maintains the practice of medicine as a profession, and that has withstood the test of centuries must be preserved for the best interests of both the public and the medical profession.

It is reasonable, too, to expect of free men in a democracy such as ours that the wage fixing system should take into account the necessity of paying for medical and nursing care in sickness and accident, though we are perhaps not sufficiently far removed from the period of the depression for this to be considered favourably. Nevertheless, seeing that we are committed to democracy, let us not have a spurious sort of thing, but carry out the principles of a free democracy; and since no doubt a certain number of successful practitioners would prefer to remain in private practice as we now know it, and would continue to hold a certain satisfied section of the community, it is right that we should not seek to eliminate all independent practitioners and hospitals. That we should seek to provide a service for those who wish to avail themselves of it and those who find themselves in undeserved poverty is quite reasonable.

All are agreed that no scheme which would deteriorate the quality of medical service or deter



the best class of medical practitioner from practising in the State would be acceptable, but if due regard is to be paid to the future of medicine in Queensland and a capitation fee basis looms up, it would perhaps be wise to consider the supplementation of this payment with an effective though small service fee in order to safeguard abuse and frivolous usage of the system.

One would hazard the opinion that advice and domiciliary visits based on a continuous contract from noon to noon, day in and day out, on a premium payment, alone leaves much to be desired. Its psychoses are "bottleitis" and "certificitis". Generally speaking in the matter of any professional service flat rates are not conducive to efficiency owing to lack of incentive, and are undemocratic.

Even in the matter of other services, such as the railway or tramway services, no one expects to be carried every day or three sections for the price of one just because the service is there and because he wants to get to the other end; and most people pay rates and taxes.

Let us make haste slowly so to speak, and for the time consider the most urgent need of the public and the profession, namely domiciliary care for the unemployed and the casual worker, and, secondly, let us seek the wider and wholehearted adoption of the principle of the classification of patients according to their responsibilities in a broadminded way and the granting of the opportunity and the facilities to people to classify themselves.

This would entail intermediate beds in State hospitals being open to the general practitioner and the specialist, both in town and country, and the fostering of such beds in private hospitals of standing.

The alternative system of classification outlined by Dr. Crisp in his presidential address in Western Australia (see *THE MEDICAL JOURNAL OF AUSTRALIA*, July 15, 1935, page 35) suggests one means for the practical application of these principles, though the proportions might have to be altered. "Such a system", he says, "would allow of the application of the principle generally agreed to, that patients should pay according to their means for hospital maintenance, nursing and medical treatment."

The idea of the community hospital has much to commend it. In conclusion, I feel justified in remarking that it is not in the ultimate interests of any community to quash private enterprise which leavens governmental standards, just as public opinion stabilizes government activities. In a democratic orderly society in which people participate in a high standard of civilization, in which there is the right to work and the right to enjoy and share in cultural activities, the basis of dignified intercourse is payment for goods and services by the participants acting on their own initiative and reserving free choice as to the nature of what they purchase.

You will agree, I am sure, that the principles of individual liberty and the freedom of the subject are paramount in a British community and that we are anxious for ours to continue a democratic British Medical Association, and one that is not unmindful of the public interests; and you will realize, I hope, that if it is to be so, it will need the enthusiastic

support of its members, especially the older members of the profession, and those members who know the ropes and who have served on its Council in the past.

The statement made by Dr. Price in his presidential address in 1934 is as sound now as it was then, and surely is the correct attitude to take. He said:

There are a few men in all callings today who have intelligence and ability to lead and to organize but who are devoting their lives to making more and more money—while young men of promise are idle. These men are wanted in State and Federal Governments and on local authority councils before they are too old and set. We should supply our quota from medicine.

Finally no worth-while medical service, using that term in its widest sense, can be carried on without a contented profession and a satisfied public. This contentment and satisfaction can be assured only by a consideration and a study of the interests of both. It is not too much to expect that both will be represented in any deliberations that may be instituted in the common weal when the by-laws are framed. Much more can be achieved at a round table conference than by controversy in the public Press.

And now I have wearied you long enough. There surely is a niche for each of us when once we have entered this age-old profession of ours. And, despite the changes in the social order of things, let us hope we are still able to respond with that higher sort of *noblesse oblige* which is our heritage. Let us agree with old Omar Khayyám and make the most of what we yet may spend, before we too into the dust descend, dust unto dust and under dust to lie, sans wine, sans song, sans singer and sans end.

#### THE RELATIONSHIP OF VITAMINS TO NORMAL HEALTH.<sup>1</sup>

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DURING the past five years great progress has been made in our knowledge of the nature and functions of the vitamins. This is particularly true on the chemical side, since we now know the structure of the vitamins, accurately in several cases and roughly in the remainder. This new chemical knowledge has not as yet contributed directly to increased understanding of the clinical aspects, but in good time it will, for it enables not only the use of pure substances for testing purposes and improved methods of assay, but it also suggests reasonable prophecies that can be made regarding the functions of the vitamins. These may help in answering the practical question of whether, with our changing dietary habits, there is any risk that some degree of deficiency may occur in our intake of these accessory factors.

Generally speaking, among civilized communities, the symptoms of gross vitamin deficiencies, for example, keratomalacia, beri-beri, scurvy *et cetera*,

<sup>1</sup>Read at a meeting of the South Australian Branch of the British Medical Association on September 26, 1935.

are rare enough; but it is becoming more generally suspected that slight deficiencies, bringing in their train symptoms somewhat ill-defined, but none the less undesirable, may be less uncommon.

This has resulted in the appearance of a large number of vitamin concentrates on the market. The proprietors of some of these make quite preposterous claims as to their therapeutic value. Until we obtain more precise information of the optimum vitamin requirements of humans at different ages and under varying conditions, a definite opinion cannot be formed as to whether these concentrates are often a desirable addition to civilized diets. We do know, however, that the optimum amount is, in many cases at least, considerably in excess of the quantity required to prevent gross symptoms of insufficiency.

It is impossible within the scope of one lecture to deal adequately with each vitamin in this connexion. I propose, therefore, to refer particularly to vitamin *A* and to omit any reference to the *D* and *E* factors. The dietary requirement of *D* is complicated by the extent of exposure to irradiation and by the calcium and phosphate content of the diet; and, while vitamin *E* may in certain cases have a therapeutic value when injected, a deficiency in the diet is extremely improbable.

#### Vitamin A.

In the case of vitamin *A* attention has until recently been directed principally at the conditions of conjunctival xerosis and keratomalacia. These objective changes are prevalent in certain countries, such as China, Japan and India. In China, keratomalacia is regarded as the chief cause of blindness, and Wright<sup>(1)</sup> maintains that it is also the chief cause of preventable blindness in the Indian Empire. But in western countries the condition, though not rare, is every much less prevalent. The associated condition of night-blindness is rather more common, as might be expected, since it develops before the objective signs of eye trouble. Obviously, however, night-blindness will not be so readily detected as keratomalacia.

The association of vitamin *A* with night-blindness has been abundantly proved, not only by the beneficial results of vitamin *A* therapy in cases of hemeralopia (not due to intraocular causes), but by chemical investigations which showed firstly that the retina is rich in vitamin *A*, and subsequently that this factor is intimately involved in the formation of visual purple. According to Wald,<sup>(2)</sup> visual purple is a conjugated protein in which vitamin *A* is the prosthetic group. Photochemical action causes the visual purple to break down to visual yellow, which also contains vitamin *A*. Part of the visual yellow regenerates to visual purple, the remainder breaking down to a mixture of substances, among which is free vitamin *A*. A certain amount of the vitamin is used up in the visual processes and, since the ultimate source of vitamin *A* is the diet, any deficiency will sooner or later manifest itself in an impaired ability to form visual purple, resulting in night-blindness.

Jeans and Zentmire<sup>(3)</sup> have devised a method of detecting hemeralopia by exposing the subject for a short period to bright light and subsequently testing the dark adaptation with a Birch-Hirschfeld photometer. Of 213 children examined by this method, 168 were normal and 45 definitely subnormal, without any apparent reason other than deficiency of vitamin *A*. All such children as were followed up responded to treatment with cod liver oil. While the children examined were drawn from the lower economic classes and were candidates for admission to hospital, it is stressed that in the majority of the cases of hemeralopia there were no other manifest signs of malnutrition and, moreover, that many of the children with normal dark adaptation appeared more poorly nourished than some of those exhibiting night-blindness.

The results of these workers indicated a 20% incidence of hemeralopia, due to vitamin *A* deficiency, without any signs of xerophthalmia.

Although night-blindness is an earlier symptom of vitamin *A* deficiency than xerophthalmia, the former is the first to disappear on treatment. This is no doubt because the drying of the conjunctiva is due to structural changes, while the addition of vitamin *A* enables almost immediate formation of more visual purple. Improvement in dark adaptation has been reported within a few hours of administration of a concentrate of vitamin *A*. This may also explain the occasional occurrence of xerophthalmia without night blindness.

Night-blindness does not, however, seem to be the earliest sign of vitamin *A* deficiency.

When Mellanby<sup>(4)</sup> obtained his results in the prevention of puerperal sepsis by the use of abundant vitamin *A*, the earlier suspicion that the *A* factor might be an anti-infective agent developed rapidly. Unfortunately, not only has there been a failure to confirm Mellanby's results, but the use of this vitamin as a therapeutic agent has proved most disappointing.

Orenstein,<sup>(5)</sup> in South Africa, was unable to detect any benefit from the administration of vitamin *A* to over 700 patients with pneumonia. Numerous other investigators reported no beneficial effects with common colds, although a minority claim that some positive results have been obtained. Experimental observations on infected animals do not indicate an improved resistance to infection in the presence of abundant vitamin *A*. The whole question has been reviewed by Robertson.<sup>(6)</sup>

Nevertheless lack of this factor undoubtedly predisposes the subject to certain types of infection. The primary effect of such lack appears to be upon the epithelial tissues, which tend to become keratinized. This degenerative change renders the surface more susceptible to bacterial attack. If this be the true cause of the infections, it is obviously unreasonable to expect an excess of the vitamin, beyond what is required to keep the surfaces in a healthy condition, to confer added immunity. It is believed, therefore, that vitamin *A* is an anti-keratinizing factor rather than an anti-infective one,

but that this still implies that an increased susceptibility to certain infections will occur when there is an actual lack of the vitamin. Harris,<sup>(7)</sup> who first suggested the term "anti-keratinizing", found that keratinization had always occurred where infection was present; but he could not detect preliminary keratinization without infection. This has, however, been since observed by others.

The changes associated with keratinization may affect the alimentary, respiratory and urinary tracts and the skin, as well as the conjunctivæ. According to Mellanby, there are also degenerative changes in the nerve supply to the epithelial layers.

There is reason to believe that the earliest signs of vitamin A deficiency appear in the skin. Though frequent references have been made to skin changes in hypovitaminosis A, it is only within the last few years that particular attention has been paid to this phenomenon. This is all the more remarkable in that Hippocrates, who recommended liver as a treatment for hemeralopia, also noted the association between night-blindness and infective conditions of the skin.

Loewenthal, in East Africa, drew attention to the dryness of the skin and papular eruptions on the extensor surfaces in natives suspected of suffering from lack of vitamin A. Of 81 natives segregated for observation, 74 showed the skin changes and only 45 of those had xerophthalmia. Similar observations were made by investigators in China.

Nicholls,<sup>(8)</sup> in Ceylon, has reported the widespread occurrence of a similar condition in schools and gaols. The condition is known by the native name *mandama*, which means toad skin, and Nicholls suggests calling the condition "phrynoderma". Among 4,000 school children in the vernacular schools, the incidence of phrynoderma was 30%. In better class schools it was 3%, and in charity schools over 80%. The incidence of such skin changes is not confined to eastern countries. An interesting case is reported by Goodwin<sup>(9)</sup> of a boy in London who, on a diet consisting mainly of bread, jam and fried fish, developed a characteristic papular eruption, which was readily cured with cod liver oil. Hemeralopia and xerophthalmia were not present.

It was rather to be expected that similar skin changes might be observed in infants, since the vitamin A content of milk is decidedly variable, and growing infants have a greater relative need of vitamin A than adults.

The vitamin A content of both human and cow's milk is about the same on adequate diets, and both are subject to considerable fluctuation. When the diet of the mother is unsatisfactory, even a breast-fed infant may develop xerophthalmia. The possibility of deficiency is perhaps greatest when dried milk is used, but cow's milk is usually altered by additions, dilutions and other treatment, to make it more suitable for infants, and the actual intake of vitamin A may be little greater when the modified

fresh milk is used than is the case with a dried milk of good quality.

Mackay<sup>(10)</sup> conducted a large scale experiment with two groups of infants. One group was fed on a diet which, up to seven months of age, consisted mainly of dried milk *plus* extra amounts of vitamins C and D; other foods of the usual type were admitted after the infant had reached about seven months. The other group had the same diet, but with a vitamin A concentrate added. The experiment lasted eight months and there were about sixty infants in each group. The infants obtaining the vitamin A concentrate were markedly more free from such skin infections as intertrigo, external otitis *et cetera*, than the controls. This did not apply with non-infective skin conditions, such as urticaria.

The presence of the extra amount of the vitamin, however, did not abolish skin infections. The protection afforded was thus not comparable with the complete prevention of keratomalacia by vitamin A.

Mackay did not observe any dryness of the skin such as is associated with phrynoderma, and she concludes that the order of symptoms in hypovitaminosis A is:

1. Increased susceptibility to skin infections.
2. Manifest dermatosis.
3. Hemeralopia.
4. Xerophthalmia } together with other results of the
5. Keratomalacia } general keratinization of epithelia.

In young rats a diminished rate of growth is one of the first symptoms of vitamin A deficiency, but this does not appear to be the case in human infants. The rat's more rapid natural rate of growth may account for this discrepancy.

The chief point of practical interest in Mackay's results is in relation to the desirability or otherwise of regularly supplementing the diet of infants with extra sources of vitamin A. Hess<sup>(11)</sup> and his co-workers, in a similar and slightly earlier investigation with babies, did not find any signs of deficiency in the absence of added vitamin A; and they insist that if the diet contain a reasonable amount of milk, symptoms of hypovitaminosis A will not occur. The discrepancy in the results may be due to a difference in the control diets. If so, it would indicate a rather narrow margin of safety in the more adequate diet. It must be remembered that among infants in the lower economic classes there is a greater risk of a shortage than was present in the Hess and the Mackay experiments, where the diets were designed to be as satisfactory as possible in every respect except the actual addition of extra vitamin A.

The extraordinary prevalence of latent rickets has clearly demonstrated the importance of supplementing the infant's diet with more vitamin D. While this was accomplished with fish liver oils, the child would no doubt also get sufficient of the A factor; but the modern tendency is to replace the liver oils by irradiated products, rich in vitamin D, but devoid of vitamin A. In view of Mackay's results, the use of cod liver oil or some other source



of both factors would seem the sounder procedure, particularly when dried milk preparations are employed. The toxic effects of cod liver oil, to which particular attention has been drawn by Agduhr and his co-workers, are probably not a sufficient reason for abandoning the oil as a therapeutic agent. Cardiac lesions should not develop, even with much larger doses of the oil than are ordinarily taken, if the diet be adequate in other respects.

As judged by the evidence of night-blindness, deficiency of vitamin A among adults in the more civilized countries would appear to be uncommon. It must be borne in mind, however, that a deficiency may arise, not only when the diet is inadequate, but also when there is deficient absorption or metabolism of the factor.

This is well illustrated in a case reported by Wilbur and Easterman.<sup>(12)</sup> Their subject was one with a history of intestinal ulceration which received surgical treatment. Subsequently a gastro-colic fistula developed. The patient then exhibited hemeralopia and a skin condition reminiscent of hypovitaminosis A, despite the fact that his diet was, and for many years had been, rich in this factor. Following operative treatment of the fistula all signs of vitamin A deficiency disappeared. In this connexion it is interesting that cases of steatorrhœa have been shown to be accompanied frequently by skin infections. And it is not unreasonable to suspect that these may in part be due to deficient absorption of vitamin A.

Numerous observers have called attention to the frequent association of diarrhœa with xerophthalmia. Although the existence of the diarrhœa would tend to reduce the absorption of vitamin A, it is probable that the condition is more often a result than a cause of deficiency in this factor. The intestinal mucosa is not immune from the structural changes which hypovitaminosis A may bring about in epithelial tissues, and its resistance to infective processes is correspondingly diminished. The frequent association of lack of vitamin A with intestinal parasites, to which attention has been drawn by Hess,<sup>(13)</sup> is also a consequence rather than a cause of the deficiency.

The possibility of disordered metabolism causing hypovitaminosis A is represented in the association of xerophthalmia with hepatic disease. As the liver is the probable site of conversion of the carotenoids to vitamin A, and is the storage place of both the vitamin and its precursors, the association is quite understandable.

Actual determinations of the vitamin A content of human livers obtained *post mortem* have yielded curious results. The widest range of values has been observed, even with otherwise healthy persons dying as the result of accidents. In several such cases the liver was found to be wholly devoid of this vitamin.

Moore,<sup>(14)</sup> in a consideration of 300 analyses, found few consistent results. The vitamin A content of the liver was on the average somewhat sub-

normal in pneumonia, but otherwise there was little evidence to support the anti-infection theory. Regular decreases were noticed with subjects who had died of nephritis, and increases in the case of diabetics. The latter result may be due to the high vitamin A content of most diabetic diets.

Both Wolff<sup>(15)</sup> and Green<sup>(16)</sup> noted a consistent diminished amount of vitamin A in diseased livers. Green also observed that, following either ingestion or injection of vitamin A, only a portion appeared in the liver, and he suggests that the liver destroys excess of the factor. The discrepancy between the amount administered and the amount in the liver is much greater in the case of diseased livers, but this is presumably due to impaired storage ability.

It must be noted that in all these *post mortem* liver analyses the vitamin A was determined by the antimony trichloride colorimetric method, which is not wholly reliable.

The relationship of the liver to vitamin A metabolism is also of interest in connexion with hypervitaminosis.

That massive overdoses of vitamin A will produce toxic symptoms has been demonstrated with experimental animals. Under these conditions the vitamin A content of other tissues besides the liver is markedly increased. The symptoms in rats include great emaciation and disturbance of calcium metabolism, as evidenced by softening of the bones. Sometimes gross lesions of the lung occur.

When carotene, the provitamin A, is fed in large amounts, such symptoms do not arise. The vitamin A content of the liver increases, but not that of other tissues. The tolerance of the liver for the vitamin seems to be very high, and it is presumably able to control the supply to other tissues of the vitamin it produces from carotene.

The quantities of vitamin A necessary to produce toxic symptoms are greatly in excess of the quantity that could be taken in natural foods or by the use of ordinary amounts of concentrates.

One final point deserves mention, and that is the apparent persistent effect of vitamin A deficiency. Bloch,<sup>(17)</sup> in his work on the Danish outbreaks of xerophthalmia, reports a high mortality among the children who had recovered from the immediate effects of the deficiency; only two-thirds survived beyond the age of eight years. In Java the frequent occurrence of bladder calculi has been correlated with early deficiency of vitamin A. In that country the adult diet does not tend to be deficient in vitamin A, while the diet of the infant does. Other indirect observations of the same sort have been made. Richards<sup>(18)</sup> has called attention to the persistence of the pathological results of vitamin A deficiency in rats. In these animals, one of the early stages of vitamin A deficiency is ulceration in the alimentary tract following keratinization. The diseased condition of the tract may persist for a long time or reach a fatal termination even when abundant vitamin A has subsequently been added to the diet. Fortunately it must be rare for children



in civilized countries to suffer a deficiency so severe as to cause such permanent structural damage.

The position in regard to the occurrence of hypovitaminosis A may be summarized as follows: There appears to be a distinct possibility of a slight deficiency of vitamin A in the diet of infants unless this is supplemented by small amounts of cod liver oil or its equivalent. In older children deficiency may be more common than has been suspected, but is largely confined to the lower economic classes. In the case of adults, at least in Europe, America and Australia, deficiencies should seldom occur, and then rarely have a purely dietary origin.

#### Vitamin B<sub>1</sub>.

The vitamin B<sub>1</sub> requirement of man has been made the subject of an exhaustive investigation by Cowgill.<sup>(19)</sup> He concludes that the average diet of American adults is quite adequate. Drummond,<sup>(20)</sup> on the other hand, is of the opinion that a slight degree of deficiency in this factor is much more common. In his Lane Medical Lectures he said:

Curiously little effort is being made to produce wholemeal bread or to lead people to adopt it. I am convinced that this will have to be done and that the sooner the problem is seriously attacked the sooner will be achieved one of the biggest advances in public health that the world has known.

Manifest beri-beri is a rare condition in the more civilized countries, but the effects of a slight deficiency are as yet not readily recognized. Anorexia and gastro-intestinal disturbances, particularly the former, may be the first symptoms. Cowgill suggests that vitamin B<sub>1</sub> concentrates might be more extensively employed in cases of anorexia, pointing out that, while it may not be often that such treatment will improve the condition, it can do no harm; and if it fails, then it will at least be known that the faulty appetite is not due to lack of vitamin B<sub>1</sub>.

To what extent deficiency of this vitamin may contribute to ulceration in the alimentary tract is difficult to determine. Rats show a high incidence of such lesions on diets only slightly deficient in vitamin B<sub>1</sub>; and McCarrison<sup>(21)</sup> indicates that in southern India many cases of gastric or duodenal ulcer may be attributed to this cause. It would at all events seem reasonable to insure an abundance of vitamin B<sub>1</sub> in the diets of patients with such lesions. This precaution, however, is not always observed, and patients on restricted hospital diets are from time to time reported as having developed symptoms of beri-beri.

As in the case of other vitamins, deficiency may be the result of faulty absorption. In such conditions (for example, chronic diarrhoea) the best results are likely to be attained by administering vitamin B<sub>1</sub> parenterally. Strauss<sup>(22)</sup> has reviewed several such cases and notes that alcoholism is one of the commonest causes.

Among other conditions that have been associated with partial vitamin B<sub>1</sub> deficiency are achlorhydria and cardiac dilatation. Peters<sup>(23)</sup> suggests that

vitamin B<sub>1</sub> concentrates be tried in cases of palpitation, breathlessness and oedema, as well as with loss of appetite.

Morgan and Barry<sup>(24)</sup> and Summerfeldt<sup>(25)</sup> have shown that improvement in growth may sometimes be obtained by adding vitamin B<sub>1</sub> concentrates to the food of children.

There is some possibility of vitamin B<sub>1</sub> deficiency in infants, since it is doubtful if the amounts of milk ordinarily consumed can supply the optimum requirement of this factor. It has become a very general practice to supplement the milk diet of infants with cod liver oil and orange juice. The orange juice would contribute a little extra vitamin B<sub>1</sub> as well as vitamin C, but the deliberate addition of vitamin B<sub>1</sub> concentrates has not been widely adopted. Hoobler,<sup>(26)</sup> Bloxson<sup>(27)</sup> and others have drawn attention to the improvements that may sometimes occur when the milk diet of infants is supplemented by extra vitamin B<sub>1</sub>; and the beneficial results in the treatment of Swift's disease (acrodynia) indicate that vitamin B<sub>1</sub> deficiency may be concerned in the aetiology of this condition.<sup>(28)</sup> Grünfelder's<sup>(29)</sup> observations on certain toxic alimentary disturbances in infants indicate that in such cases it is necessary to inject the vitamin B<sub>1</sub> concentrate.

It is becoming clear that vitamin B<sub>1</sub> is closely concerned in carbohydrate metabolism. In its absence there is an inability to dispose of lactic acid in the normal way, an increase in the glycogen content of the liver, and an appearance of methyl glyoxal in the urine. The correlation between these phenomena and the clinical indications of hypovitaminosis B<sub>1</sub> is not yet understood; but it would appear that vitamin B<sub>1</sub>, like vitamin C and the flavine component of the B<sub>2</sub> complex, is concerned in the oxidation-reduction mechanisms of the tissues.

#### Vitamin B<sub>2</sub>.

An insufficiency of vitamin B<sub>2</sub> (or G, as it is termed in America) is less likely to occur than is a deficiency of vitamin B<sub>1</sub>. Though the distribution of the two factors is not dissimilar, adequate amounts of vitamin B<sub>2</sub> seem to be more readily obtained with ordinary diets.

Gross deficiency of vitamin B<sub>2</sub> is regarded as at least a prime factor in the development of pellagra; but since there is considerable difference of opinion regarding the aetiology of pellagra, a brief review of the present position may not be out of place.

Pellagra is a condition chiefly characterized by a pigmented dermatitis, which occurs mainly among peoples in rural districts whose diet is often unsatisfactory in several respects. The incidence of the disease is largely, but not wholly, confined to regions where maize is a staple item in the food.

Numerous theories have been evolved regarding the causes of pellagra. Of those that are still in vogue only the following need be mentioned:

1. The protein deficiency theory. According to this the disease is primarily due to the consumption of protein with a low biological value. The theory

was based mainly on one fact, namely, the beneficial effect of high grade protein on the disease, and one supposition, namely, that the proteins of maize are of low biological value. The former phenomenon is perhaps to be explained by the fact that vitamin  $B_2$  is usually associated with high grade proteins, while, as regards the latter, recent estimations have shown that the biological value of maize proteins is much higher than was once thought and is not inferior, for example, to that of wheat protein.

2. The vitamin deficiency theory. According to this theory, the condition is due to insufficiency of vitamin  $B_2$ . This accessory factor has had two functions assigned to it: the promotion of growth and the prevention of pellagra. Its relation to pellagra is firmly based on the observations of Goldberger, since confirmed by others, that human pellagra can be cured by concentrates of vitamin  $B_2$  free from protein and amino-nitrogen. The main objections to the theory have been: (i) that dermatitis has not regularly developed in experimental animals on diets apparently deficient in vitamin  $B_2$ , and (ii) that the vitamin  $B_2$  content of rice, as estimated by the growth-promoting effect, is less than that of maize. Yet pellagra is of rare occurrence among rice-eating peoples.

3. The maize toxin theory. This was recently revived by Chick.<sup>(30)</sup> There were many earlier variations of it, but her suggestion was that maize contains some toxic substance which is neutralized either by high grade protein or by vitamin  $B_2$ . She thus drew a parallel between the curative action of vitamin  $B_2$  in pellagra and the alleged detoxicating action of vitamin A in ergotism and lathyrism. This toxin theory certainly would explain many of the known facts; but there is little positive evidence to support it. The evidence that a toxic substance occurs in maize is particularly contradictory.

About two years ago it was claimed that vitamin  $B_2$  had been identified with a fluorescent compound, flavine. It was demonstrated that pure flavine could cause growth in animals whose development had been arrested by a diet deficient in vitamin  $B_2$ . Subsequently it was reported that pure flavine had no curative action in pellagra; and the vitamin theory received a distinct shock.

Now, however, it has been clearly shown that what we have called vitamin  $B_2$  is in reality two separate factors, flavine and what is now called vitamin  $B_6$ . The former has a growth-promoting action, and the latter an anti-dermatitis effect, though there is still some disagreement on the point of whether either factor acts quite successfully in the complete absence of the other.

Although the two factors occur together in food-stuffs, there is probably a wide range in their relative proportions. If it can be shown that maize contains less of  $B_6$  factor than other cereals, and that the so-called  $B_2$  deficiency diets, on which animals failed to develop dermatitis, were deficient mainly in flavine, then the chief objections to the vitamin theory of pellagra will fall to the ground.

It must be remembered, however, that human pellagra is frequently associated with other deficiencies and additional dietary treatment besides the supplying of sufficient vitamin  $B_6$  will often be necessary.

As has been mentioned before, pellagra is of rather rare occurrence, except in those regions where maize is a staple item of the diet. Nevertheless, cases have been reported in which pellagra developed on the restricted diets supplied to patients with gastro-intestinal disorders, or to mental patients who required forced feeding. There is also evidence that gastro-intestinal conditions that interfere with correct assimilation may result in pellagra, in the same way that other vitamin deficiencies may occur.

It has been suggested that a close inspection in mental hospitals and in cases of prolonged gastro-intestinal disease might reveal more cases of pellagra than is at present suspected.

#### Vitamin C.

Several methods have been suggested for the detection of vitamin C (ascorbic acid) deficiency. Göthlin, with an adaptation of the Rumpel and Leede test for capillary resistance, showed that some 20% of rather poorly fed school children in Scandinavia had increased capillary fragility. Further investigations have confirmed the existence of a greater degree of latent scurvy than has been suspected.

Dalldorf<sup>(31)</sup> has developed a simple technique (based on Hecht's method) for the determination of capillary resistance by reducing pressure instead of increasing it. He stresses that its use is complicated by wide individual variations, resulting possibly from differences in the nature of the skin. It must also be borne in mind that there are many other causes of diminished capillary resistance besides deficiency of vitamin C. Dalldorf records a rather high incidence of latent scurvy among ill-fed children, as judged by results with his own method.

Harris<sup>(32)</sup> and his co-workers have suggested that an estimate of the vitamin C resources of the body may be obtained by the determination of vitamin C in the urine; this procedure would be a more specific index than the capillary resistance tests.

Yavorsky, Almaden and King<sup>(33)</sup> investigated the vitamin C content, by the titration method, of material obtained from hospital autopsies. The individual variations were wide, and about 20% of the subjects might be regarded as having latent scurvy, judging from the critically low vitamin C content of their tissues. Generalized infections were more common when the vitamin C content was low. These authors suggest that the determination of the vitamin C content of the blood might be of occasional clinical value.

The relation of deficiency in vitamin C to increased infection appears to have been more definitely established than in the case of other vitamins. The widespread distribution of this factor in all tissues of the body, which has been demonstrated by Bourne<sup>(34)</sup> and others, renders such a

relationship extremely probable. In this connexion the recent observations of Rinehart and Mettier<sup>(35)</sup> on rheumatic fever are particularly interesting. As a result of experimental work with guinea-pigs, these investigators suggest that insufficiency of vitamin C may be a necessary background for the development of rheumatic fever.

The problem of infantile scurvy has received much attention, and it is generally conceded that milk cannot be relied upon to supply adequate amounts of vitamin C.

I have deliberately refrained from discussing the relationship of vitamin deficiencies to dental health. Numerous claims have been made in connexion with vitamins A, C and D; but the evidence is conflicting, the observations on humans are often not fully controlled, and the extent to which the results of animal experimentation may be applied to humans is not well understood.

#### Comments.

In a country like Australia, where the standard of nutrition is generally high, there is no reason why normal people should suffer from any vitamin deficiency. Failure to obtain adequate supplies would be the result of lack of knowledge rather than lack of opportunity. Since rich natural sources of the accessory food factors are readily available, the use of vitamin concentrates would seem superfluous. There are two qualifications, however, that should be made to these remarks:

1. In the less fertile and more remote areas of this continent, particularly in the interior, the securing of adequate supplies of vitamins must sometimes present a very real problem.

2. Until there is a more extensive use of wholemeal bread, the supply of vitamin B<sub>1</sub> cannot be regarded with complaisance. As Drummond has pointed out, it is not easy, though certainly possible, to obtain adequate amounts of this factor where only ordinary food items are consumed and wholemeal bread is omitted.

With patients who are being treated by restricted diets, or in cases of impaired assimilation, the risk of deficiencies is much increased. Here the vitamin concentrates are of unquestionable value, either for supplementing diets without otherwise affecting their composition, or for parenteral administration.

Small amounts of fish liver oils and wheat germ or yeast preparations may often be used with advantage in the diet of infants. Older children should be able to obtain their requirements from those commoner foods which are rich in the various factors. Whether they always succeed in actual practice is at least doubtful. It must be remembered, moreover, that the growing child has a higher relative requirement of most vitamins than the adult. This is particularly true of vitamin D, and there are far fewer good sources of vitamin D among our ordinary foods than is the case with any other factor.

There seems little justification for the hope that increased amounts of vitamins will be of any use,

except when the intake is already below the minimum required for perfect health. It remains to be seen how accurately we have gauged that minimum quantity; and the realization that the grosser signs of deficiency are no index to the optimum requirement is an important preliminary step.

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## THE REACTIONS OF 350 CHILDREN TO DIPHTHERIA ANATOXIN.<sup>1</sup>

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THIS paper is not intended to be a scientific discussion of the subject of immunization against diphtheria. It is merely a statement of observations made on 350 children at the Fairbridge Farm School who were immunized by me during the last few months.

So much has been said about excessive reaction to anatoxin immunization that a few personal observations may be of some use to those who may be called upon to give advice about, or actively to carry out, the process. Anyone who has seen a number of children die from diphtheria or who has been called upon to intubate or operate on a child suffering from a laryngeal infection, has little wonder that the term "strangler" has been applied to laryngeal diphtheria. And there is very little doubt in his mind that a method of wholesale prevention, even if attended with a few risks, is to be preferred to the awful consequences of this condition.

A recent article in *THE MEDICAL JOURNAL OF AUSTRALIA* of June 1 quoted figures from New York, where since 1929 the deaths have been reduced from 700 in that year to 100 last year, and the mortality rate has fallen from 11.24 per 100,000 to 1.38. In Toronto also the figures are almost identical.

The immunization of the children of the Fairbridge Farm School against diphtheria was commenced as a direct result of two cases of diphtheria occurring there within a few months. One patient was suffering from a nasal infection and one from an ordinary faucial infection. Swabbing of contacts established that out of 359 children there were twenty-six who were carrying the diphtheria bacillus in the nasopharynx, and the organism was grown from the discharge of another who had a chronic *otitis media*.

On looking through the records I found that there were thirty children known to have been tested by the Schick test and immunized by some method unknown, and twenty others who had failed to react to the Schick test and who were considered to be immune. So among 359 children there were potentially 300 possible sufferers from diphtheria, only twenty of whom had previously contracted the disease. With such a number of infected cases, twenty-six in 300 possibles, immunization was thought

to be the only sure means of disposing of the danger of an epidemic.

The total number of children investigated was 357; of these 56 had been subjected to the Schick test in England, thus 301 were left who had not been tested for immunity. I shall deal with these two groups separately.

The Schick test is performed with diluted diphtheria toxin. A positive reaction is judged by an area of redness of one to three centimetres in diameter appearing in twenty-four hours with maximum redness on the fourth day, persisting from seven to ten days. If there is no reaction, the patient is considered to be immune. A positive reaction means that the patient is susceptible and liable to contract the disease. Anatoxin is formalized diphtheria toxin which results in retained antigenic value and destroyed toxicity.

The Moloney or anatoxin skin test is used to test the reaction of the person to be immunized to the immunizing agent. Strictly it is not a test for ascertaining immunity to diphtheria, but as the results run almost parallel, it can be used as such. I did not use the Schick test, as the time factor was of some consideration. It would have taken twice the time to perform both Schick and Moloney skin tests, and I thought that syringes were liable to get mixed and the results would then be valueless.

Those persons who give a positive result with the Schick test, and a negative result with the anatoxin test, should be immunized by full doses of anatoxin. Those who give a negative result with the Schick test, and a positive result with the anatoxin test, are numerous. They, however, do not require immunization. Those who give a positive result both with the Schick test and the anatoxin test are few in number. The majority are over the age of seven years. It is probable that they possess some degree of immunity. There is justification for leaving them without artificial immunization. If, however, immunization be especially desired, it may be attempted by the use of minute doses of anatoxin. Three doses, each of 0.01 cubic centimetre, are suggested, an interval of three weeks being allowed to elapse between each.

Arguing from this, it appeared that the Schick test could be dispensed with. The possibility of obtaining a negative result from the Schick test with a negative result from the anatoxin test is not discussed; but actually a few children turned up who did not react to the anatoxin test and who had failed to react to the Schick test in England. These are discussed in another part of the paper.

### Moloney Skin Test Technique.

One-tenth of a cubic centimetre of diluted anatoxin (one in twenty) is injected intradermally, and the reaction is read in twenty-four hours.

Of 301 children who had not been tested by the Schick test in England, one gave what I called an excessive positive reaction to diluted anatoxin, 151 gave large positive reactions, 128 gave no reaction, and 58, a large group, gave reactions that I called "slight positive". So in this series there were four types of reactions observed:

<sup>1</sup> Read at a meeting of the Western Australian Branch of the British Medical Association on July 17, 1935.



1. The positive reaction which shows itself as a raised erythematous area of about 1.0 centimetre in diameter, occurring within twenty-four hours, and fading slowly. Slight desquamation is noticed about the seventh day, and the erythema persists for from two to four days, or even longer.

2. The negative result or no visible manifestation of reaction.

3. The excessive positive reaction. This reaction was so large and so well marked that it called for distinction. The patch of erythema was at least six centimetres in diameter. The arm was red, hot, swollen and painful, and the axillary glands were enlarged. No general symptoms were observed, though the patient's temperature was taken twice a day for four days.

4. The slight positive reaction. A small raised area, 0.5 centimetre in diameter, as red as that of the positive reaction, and disappearing in under forty-eight hours, was called by me a slight positive reaction. This last group constituted a problem as to whether immunization was necessary or not.

A precaution must be taken in skin testing. The intradermal injection must not be too shallow, and the whole amount should not be injected under an area of six millimetres (one-quarter of an inch) in diameter; otherwise a small superficial skin necrosis will result, as I found, and the reaction to this necrosis makes interpretation very difficult.

#### Age Groups.

It is very hard to glean anything of material value from the age grouping of these children, as there were many more children above than below the age of ten years. The youngest tested was seven years and the eldest fifteen and a half years. Unfortunately there were no children of the pre-school age. The age grouping is shown in Table I.

TABLE I.

Age Group in Years.	Number of Children.	Positive Reaction.	Slight Positive Reaction.	No Reaction.
7 to 8 .. ..	6	1	1	4
8 to 9 .. ..	20	5	5	10
9 to 10 .. ..	32	12	3	17
10 to 11 .. ..	46	15	6	25
11 to 12 .. ..	57	20	11	26
12 to 13 .. ..	63	26	7	30
13 to 14 .. ..	58	28	13	17
Over 14 .. ..	21	11	7	3

Thus of a total of 309 children, 119 gave positive reactions, 54 gave slight positive reactions, and 136 gave no reaction.

I have graphed these results in age groups, and neglecting the 9 to 10 years group, which appears to be abnormal on consideration of the whole graph, there seems to be a gradual rise in the number which gave positive reactions. The slight positive reactions all show a decided rise from the eleventh year onwards. Similarly the combined graph of these two groups, positive and slight positive, shows a rise in later years.

If the result of the Schick test runs parallel to anatoxin sensitivity and if the slight positive reaction

denotes some degree of anatoxin sensitivity, then there is a gradual rise in immunity to diphtheria between the ages of seven and fifteen years.

#### Method of Immunization.

Three methods of injection were used. With the negative group I was not courageous enough to use the technique recommended of three injections at three weekly intervals of 0.5, 1.0 and 1.0 cubic centimetre, having been somewhat alarmed by reports of others who were using this method of immunization. Extremely large local and general reactions were described, which made one a little wary of using it. Consequently at first I commenced with 0.5 cubic centimetre, followed this three weeks later by 0.5 cubic centimetre, and finally three weeks later by 1.0 cubic centimetre. This method I shall refer to as method "A".

Finding that reactions were not so prevalent or so severe as I was led to believe, I tried the recognized standard method, recommended by the Serum Laboratories (0.5, 1.0, 1.0 cubic centimetre at three-weekly intervals). This method I am calling method "B".

For those with slight positive reactions I used a method of small injections, 0.1 cubic centimetre, at three-weekly intervals. This method I am calling "C".

The types of reaction to undiluted anatoxin are six:

1. No reaction.
2. Slight local reaction which consists of a slight blush over 1.0 centimetre in diameter, with very little soreness or discomfort and which disappears quickly.
3. Local reaction which is very like that of the positive result of the Moloney skin test.
4. The large local reaction, which is a large area of redness, sometimes ten centimetres in diameter. It is very painful, and somewhat brawny to feel; it has well demarcated edges, looking very like a patch of erysipelas, but without its shininess. This reaction may be accompanied by enlargement of the nearest group of lymph glands, but enlargement was seldom seen in the more remote groups. This reaction is not usually accompanied by a rise in temperature above 37.8° C. (100° F.), and the patient has no other untoward symptom.

5. The general reaction is accompanied by the local reaction, but in this case the temperature is above 37.8° C. (100° F.), and the patient feels ill. Lassitude is manifest, and occasionally nausea and vomiting. A few days' rest in bed seems to be the best treatment. The temperature rapidly declines about the second or third day, and the patient is almost immediately convalescent.

6. The delayed reaction, which is fairly rare; it may be like any of those mentioned before, but the onset is delayed until the fourth or fifth day.

Of 62 patients immunized by method "A", 18 showed a large local reaction, that is 29.9%. These were distributed thus: ten after the second injection, four after the first, and four after the third. In

this group only one patient showed a general reaction with the large local reaction. In this patient the temperature was elevated to 38.9° C. (102° F.) for three nights after the first injection; it rose to 37.8° C. (100° F.) after the second, and to 38.3° C. (101° F.) after the third injection. He showed no untoward after effects.

Among these 18 patients there were only four who had more than one large local reaction, the subsequent reactions being ordinary local reactions. Those who had more than one large local reaction had a large local reaction on each occasion and one of these was the general reaction already mentioned.

Seventy-nine patients were inoculated by the "B" method and 18 showed large local reactions, that is, 22.9%. Five reactions occurred after the first injection, 11 after the second, and two after the third. Among the 11 which occurred after the second injection six general reactions were manifest, whilst one patient who had a large local reaction on the first occasion had a general reaction after the second injection. There were fewer large local reactions with the "B" method, but a far greater number of general reactions. So that if general reactions are to be avoided, it seems that method "A" is to be preferred to method "B".

With the "C" method of injection there were only five patients who showed large local reactions, and these all occurred after the second injection.

Summarizing these results: With full doses of anatoxin, less than one-third of the patients show any unfavourable reaction, and this reaction is not in any way dangerous to the child; and, though painful at the time, it cannot be regarded as any serious contraindication to the use of anatoxin as an immunizing agent.

Considering the group who had been tested in England by the Schick test, there were 56 children in this group. Of these, 21 gave no reactions; that is, they were supposedly immune to diphtheria. Of these 21, 12 gave a positive reaction to anatoxin, two showed slight positive, and seven gave no reaction. This last group of seven is interesting. The Schick test in England indicated that they were immune to diphtheria; the failure to react to the anatoxin test indicated that they should be immunized. I decided then to watch the reaction to anatoxin carefully. The results are shown in Table II.

TABLE II.

Case No.	Schick Test.	Moloney Test.	Reaction to Anatoxin Inoculation.		
			First Inoculation.	Second Inoculation.	Third Inoculation.
1 ..	No reaction.	No reaction.	None.	None.	None.
2 ..	No reaction.	No reaction.	Slight local.	Local.	Local.
3 ..	No reaction.	No reaction.	None.	None.	None.
4 ..	No reaction.	No reaction.	Slight local.	Slight local.	Local.
5 ..	No reaction.	No reaction.	Delayed local.	Local.	Local.
6 ..	No reaction.	No reaction.	Local.	Local.	Slight local.
7 ..	No reaction.	No reaction.	Slight local.	Slight local.	Slight local.

This seems to show that, as there was no outward reaction to full doses of anatoxin, the results of the Schick tests were fallacious. Of course it opens up the question as to whether a child who fails to react to the Schick test can lose his immunity.

There were 35 children who gave positive reactions to the Schick test in England, and of these 30 had been immunized. Of these 30, 16 gave positive anatoxin reactions, eight gave slight positive reactions, six gave no reaction. Six immunized children therefore showed no reaction to the Moloney skin test. The subsequent fate of these children is shown in Table III.

TABLE III.

Case.	Schick Test.	Immunized.	Moloney Skin Test.	Reaction to Anatoxin.		
				First Inoculation.	Second Inoculation.	Third Inoculation.
1 ..	Positive.	England.	No reaction.	Local.	Local.	Slight local.
2 ..	Positive.	England.	No reaction.	Local.	Local.	None.
3 ..	Positive.	England.	No reaction.	Slight local.	Local.	Local.
4 ..	Positive.	England.	No reaction.	Local.	Local.	Local.
5 ..	Positive.	England.	No reaction.	Slight local.	Local.	Slight local.
6 ..	Positive.	England.	No reaction.	Slight local.	Slight local.	Slight local.

So, though these children were immunized in England by some method, they gave no reaction to the anatoxin skin test and no outward reaction to larger doses, which means, as far as I can see, that the children were not immunized by the anatoxin method, or that the immunity has been lost, or even that the records may be inaccurate.

There were five other children who had given positive reactions to the Schick test in England and who had not been immunized. Of these, three failed to react to the anatoxin test, one gave a slight positive anatoxin reaction, and one gave a positive anatoxin reaction.

If this is considered with the general age rise of sensitivity to anatoxin discussed before, it shows that the results of the Schick and anatoxin tests run somewhat parallel. The ages at which the Schick tests were performed on these children are unknown, but the ages of the three who did not react to the Moloney skin test are ten and a half years, eleven years and thirteen and a half years. The one with the slight positive reaction is fourteen, and the one with the positive reaction is thirteen and a half years of age.

In the late years it was shown that the usual occurrence was a reaction to anatoxin, and so one has little difficulty in explaining the acquisition of a positive anatoxin and slight positive anatoxin reaction at thirteen or fourteen years of age.

On delving into the history of these children it was found that two children had had diphtheria in Australia and 18 had had the disease in England. Of the two who had had the disease in Australia, one had it on arrival, and the other, from the same party, developed it three months later; both these

children gave no anatoxin reaction, and were aged eleven and seven years respectively. Both were given antitoxin, one two months before the anatoxin skin test was made, and one five months before in the acute stage of the disease. From this it appears that an injection of antitoxin does not render a child immune for any length of time.

Eighteen children had had the disease in England, and three have been immunized. Two of these had positive reactions, and the other, aged eleven years, gave no reaction. This oddity has already been discussed. The remaining 15 showed seven positive reactions, two slight positive reactions, and six failures to react to the skin test. The youngest child showing a positive reaction was twelve years of age, while the six failures to react were all in children between ten and twelve years of age, except one which was over twelve years. From these it can be concluded that an attack of diphtheria does not render an immunity, as those who have a positive reaction to the anatoxin test would have probably acquired immunity in any case at this stage.

The 26 original carriers found were given 8,000 units of antitoxin prophylactically two months before any thought was given to immunizing them, and before I knew that some had been immunized in England after Schick testing. Four had been tested by the Schick test. Two who gave no reaction and two who gave positive reactions had been immunized; of these, three gave no reaction to antitoxin and one had a rash on the ninth day. The one with the rash gave no reaction to the anatoxin test, and two of the others also gave no reaction, the fourth giving a positive reaction. The three anomalies have also been discussed.

The other 22 showed various reactions to antitoxin. Twelve had typical serum sickness, a temperature of 38.9° C. (102° F.), enlarged axillary and cervical lymph glands, pain and stiffness, and tenderness in both legs on the eighth day; but they soon recovered.

The other ten showed typical serum reactions which varied from a few patches of urticaria to practically the whole body being covered. The time of onset varied from one hour to nine days. In the original case of diphtheria mentioned above the child had an urticarial reaction twenty-three days after injection. Of these 22, 13 gave positive reactions to the Moloney skin test, two gave slight positive reactions, and seven did not react. Five of the seven who did not react gave no reaction to antitoxin, one had a rash, and the other a general reaction. His reaction to full doses of anatoxin given by the "A" method was only of the local variety.

Of the 13 children with positive anatoxin reactions, seven showed varying reactions to antitoxin of no great severity, and six showed no reaction at all.

From these few facts it can be concluded that antitoxin injections will give reaction in a certain number of cases, no matter whether the result of the anatoxin test is positive or not; but there is more chance of a reaction to antitoxin if the anatoxin gives a positive reaction. It must, however, be remembered that the reaction to antitoxin is probably due to the serum. In any case, however, it seems

better to do an anatoxin test and to wait twenty-four hours than to inject a quantity of antitoxin prophylactically.

No further skin testing has been done in these cases as ample evidence of others shows that inoculation of anatoxin establishes a permanent immunity in 80% to 90% of cases, and sufficient time has not elapsed to make the doing of this worth while or the interpretation accurate.

The number of cases in subgroups is too small to justify definite conclusions of any scientific value, but I do consider that the number of cases inoculated bring forth this fact, that, despite the antivivisectionist pamphleteers, no great harm can be caused by immunization with anatoxin. The process may be painful, but is not harmful; even general reactions which are less than 2%, are of no serious consequence. It seems to me worth while, if possible, to render children immune and so to prevent the alarming number of deaths from diphtheria, and the complications which follow when patients are cured of the disease, but go through life with a permanent tracheotomy or an enlarged and affected but barely compensated myocardium.

## Reports of Cases.

### A SEVERE FORM OF TETANIA PARATHYREOPRIVA TREATED WITH COLLIP'S PARATHYREOID EXTRACT.

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IN view of the rarity of tetany of the spontaneous as against the post-operative type the case to be described may prove interesting.

Miss M.H., aged twenty-five years, was admitted to hospital on July 15, 1935, complaining of symptoms suggestive of a pyelonephritis following an attack of "influenza". The temperature is said to have been raised, the patient also had frequency of micturition and pus was present in a sample of the urine which had been tested. There was pain in the left renal region. The patient was put on a light diet, plenty of fluids and also a mixture of citrate of potash and buchu (one tablespoonful every four hours), the bladder was catheterized and 30 cubic centimetres (one ounce) of residual urine were found.

On the night of July 16 the patient said she had a "slight rigor", but there was little pain and the frequency was less. At 6.30 p.m. on July 17 she felt "cold and shivery" and her temperature was 38.5° C. (101.4° F.). On July 18 residual urine was 60 cubic centimetres (two ounces) and its reaction was still acid. Sodium bicarbonate, two grammes (half a drachm), was given every four hours with citrate of potash, one gramme (15 grains), up to 10 a.m. and citrate of potash, 1.5 grammes (twenty-five grains), was given at 2 p.m. and at 6.30 p.m. The reaction of the urine became suddenly alkaline at 5 p.m. At 6.30 p.m. the patient became very pale and was in a cold perspiration and complained of a sinking feeling. Twitchings appeared shortly afterwards until 9 p.m., when I was asked to see her. She was comatose and in the midst of a typical tetany affecting limbs, face, and trunk, Trousseau's and Chvostek's signs being most marked. The administration of alkalis was stopped and an intravenous injection of 10 cubic centimetres of a 10% solution of calcium gluconate was given. Within 10 minutes the patient had recovered consciousness, but rigidity and



muscular irritability were still present. Spasms could be produced on the slightest stroking over the facial or other exposed nerves. She complained of a pain in the muscles and had hyperaesthesia. Parathyroid extract and calcium were ordered in addition to a high calcium diet. The pathologist's report on a catheter specimen of urine was that a few epithelial cells were present, but no pus, blood, or casts were found. Culture was sterile.

On July 19, 1935, the patient was much better, but still showed neuro-muscular irritability—sponging the body or brushing her hair even lightly provoked disproportionate contractions. Residual urine measured 30 cubic centimetres (one ounce). The urine was acid and the patient slept well during the night. Oral administration of calcium was continued.

On July 20, 1935, the patient was fatigued and drowsy in the early morning and perspiring freely. She vomited all the tablets that she had taken during the night and refused fluids. At 10 a.m. a most severe attack of tetany occurred. Coma, convulsions (stiffness and rigidity of the limbs in between the spasms were marked), incontinence of urine and faeces occurred as well as marked laryngeal stridor. The pupils reacted to light; the fundi were normal.

"Parathormone", five units, was given with ten cubic centimetres of 10% calcium by intravenous injection and twenty units of "Parathormone" were given intramuscularly. Her condition, which was grave prior to the injection, improved rapidly and by noon the patient felt much better, complaining only of general weakness. Owing to incontinence the patient's bladder was catheterized and eight ounces of urine were removed. Anaesthesia of the bladder was noted. Calcium and vitamin D were given by mouth in large doses.

On July 21, 1935, the patient's condition had greatly improved, thirty-one ounces of urine being voided voluntarily between 6 a.m. and 6 p.m. A further twenty units of "Parathormone" were given by intramuscular injection.

On July 20, 1935, a blood count was made with the following result:

Erythrocytes, per cubic millimetre, ..	4,310,000
Colour index .. .. .	0.96
Leucocytes, per cubic millimetre .. ..	7,200
Neutrophilic cells .. .. .	69%
Lymphocytes .. .. .	24%
Monocytes .. .. .	4%
Eosinophilic cells .. .. .	3%

The red cells were normal in size and shape, the white cells were mature and the platelets were normal.

On July 22, 1935, the patient was nauseated. The results of blood calcium estimations were not yet to hand so it was thought advisable, in view of the nausea, to withhold the "Parathormone" temporarily and to rely on calcium with vitamin D taken by mouth. The patient was constipated and the afternoon tea was vomited. The urine passed from 8 a.m. to 8 p.m. was two pints six ounces; residual urine was four ounces. The reaction of the urine was acid, its specific gravity was 1.005, it was clear.

On July 23, 1935, the nausea was gone; no incontinence of urine was present and the bowels were opened. Three parts of urine were passed; its specific gravity was 1.014. Some muscle spasm and rigidity were present; fifteen units of "Parathormone" were given by intramuscular injection. It was reported that the blood calcium on July 19 was 7.3 milligrammes per 100 cubic centimetres.

On July 24, 1935, it was reported that the blood calcium on July 22 was 7.3 milligrammes. The patient had slept well during the night, but in the early morning a further attack of tetany, not so severe as that of July 20, occurred, the patient quickly passing into coma with incontinence of urine and faeces and laryngeal stridor; "Parathormone", five units, was given in ten cubic centimetres of 10% calcium by intravenous injection and twenty units by intramuscular injection. Within a few hours the patient was again normal, but very weak.

On July 25, 1935, the patient's condition was good. "Parathormone", fifteen units, was given intramuscularly, calcium and vitamin D still being administered by mouth. Incontinence was still present. The blood calcium was now 14.5 milligrammes per hundred cubic centimetres.

On July 26, 1935, the incontinence was becoming less pronounced. Fifteen units of "Parathormone" were given intramuscularly. Residual urine measured five ounces.

On July 27, 1935, the patient still maintained her improvement. Ten units of "Parathormone" were given intramuscularly and calcium was given by mouth.

On July 28, 1935, calcium and irradiated ergosterol were given orally. The incontinence had almost cleared up.

On July 29, 1935, ten units of "Parathormone" were given intramuscularly together with calcium and ergosterol.

On July 31, 1935, eight units of "Parathormone" were given intramuscularly, together with calcium and ergosterol. The polyuria became less. The patient was walking about. The blood calcium was eleven milligrammes per centum.

On August 1, 1935, X ray examination revealed no abnormality of the pituitary region. After "Uroselectan" was given no abnormality was found in the kidneys; the function of both renal tracts was normal.

On August 2, 1935, the basal metabolic rate was -13; the blood cholesterol was 120 milligrammes per centum.

#### Comment.

Trousseau described three degrees of tetany: (i) a mild type affecting peripheral muscles only (spasm may be limited to the hands); (ii) a moderate type in which not only the limbs, but facial and trunk muscles are involved; and (iii) a severe form extending also to the involuntary muscles.

The syndrome of tetany is, however, much more than a simple muscular spasm and any portion of the nervous system may be affected whenever the available calcium ions are decreased (usually when the serum calcium is below 7 milligrammes per 100 cubic centimetres). The serum calcium may, however, be normal, but the ionic calcium low; for example, in conditions of alkalosis, which possibly was the deciding factor in the onset of spasms in this case (*vide* July 18, when bicarbonate of soda was added in an endeavour to render the urine alkaline). The gross decrease in the calcium ions following an increase of the bicarbonate ions in the body fluids had thus caused a general disturbance throughout the nervous system. In tetany associated with alkalosis only, the attacks are generally of short duration and the blood calcium is generally normal, which was not so in this case. Spontaneous or idiopathic tetany is recognized by a gradual onset of chronic tetany associated with a low serum calcium. The absence of nutritional disorders, such as rickets, osteomalacia *et cetera*, as in this case, aids the diagnosis of the type.

Three measures are to be noted in the treatment of these cases to restore calcium to normal: (i) Collip's parathyroid extract, (ii) a high calcium diet with calcium taken orally, and (iii) transplantation. Collip's experiments made it quite clear that the premonitory signs of hypercalcaemia are nausea and vomiting, and he found that they develop so early that there is no danger, provided the hormone administration is discontinued. The nausea in our patient, evident on July 22, was presumed to be a danger signal in the absence of the blood calcium report and the "Parathormone" was withdrawn. This was against our wish to carry out the method adopted by Lissner, and, as the result of the interruption of the treatment, a repetition of the severe tetany occurred on July 24. Her nausea was apparently due to constipation.

It is interesting to note that the patient had been treated a few years previously for hypothyroidism by Dr. E. H. Stokes. Her condition at that time also showed a marked ovarian dysfunction, which improved (Dr. Stokes informs me) wonderfully after administration of thyreoid extract.



## ANURIA FOLLOWING APPENDICECTOMY.

By P. L. HIPSLEY, M.D., F.R.A.C.S.,

Honorary Surgeon, Royal Alexandra Hospital for Children,  
Sydney; Honorary Surgeon, Royal Hospital for  
Women, Paddington.

R.W., AGED eleven years, a healthy looking girl, had had her appendix removed on April 11, 1935, following upon attacks of abdominal pain, and after a microscopic examination of her urine had excluded the presence of pyelitis. The appendix was found to be thickened, but not acutely inflamed. Four days after the operation she complained of severe abdominal pain, and had some scalding on micturition. There was tenderness in both loins, and the urine showed a cloud of albumin but no pus, even on microscopic examination. On April 16 there was almost complete suppression of urine, only about five cubic centimetres being passed in a twenty-four hour period. She vomited several times during the day, and the abdominal pain increased. On April 17 she complained of severe headache and there was dimness of vision and twitching of the muscles of the right arm. Her systolic blood pressure was 140 and her diastolic pressure 100 millimetres of mercury. The blood urea was 280 milligrammes per 100 cubic centimetres of blood. X ray examination of the renal tract failed to reveal the presence of calculi. There was complete suppression of urine. Venesection was done, two ounces of blood being withdrawn and 300 cubic centimetres of normal saline solution with 10% glucose being injected.

I saw the patient first six days after the appendicectomy and decided to examine both kidneys through lumbar incisions. The right kidney was explored first; there was evidently some obstruction low down in the ureter on this side, as the pelvis and ureter were tensely distended, although there was no evidence of hydronephrosis. A small incision was made through the posterior aspect of the pelvis and a number 15 Jaques catheter was passed through the renal parenchyma, the end being left within the renal pelvis. The small opening in the pelvis was then sutured, the kidney was replaced, and the catheter was brought out through the loin. Within a few hours the catheter commenced to drain blood-stained urine, and a small quantity of urine was passed *per urethram*. The right kidney continued to drain urine at about the normal rate for the next four days, but the left kidney still did not function, as no more urine was passed *per urethram*. The general condition of the child improved considerably and the uræmic symptoms entirely disappeared.

I thought that it might be possible to pass a ureteral catheter up to the left kidney, but the bladder seemed to be in a state of tonic contraction, and it was found to be impossible to distend it with the few ounces of saline solution necessary for a cystoscopic examination. It was thereupon decided to explore the left kidney, and this was done by Dr. Steigrad. An exactly similar condition was found on this side as had been discovered on the other side, and a similar method of treatment was adopted. Again within a few hours of operation this kidney commenced to excrete urine freely and a small but increasing amount was passed daily *per urethram*. On April 22 the blood urea was 60 milligrammes per 100 cubic centimetres and on April 25 it was 34 milligrammes per 100 cubic centimetres. The child's condition rapidly improved, but the urine from both sides now began to show a fair amount of pus. On April 30 the drainage tube was removed from the right side, and three days later that from the left side was removed. The lumbar incisions soon healed completely. The pyelitis cleared up with treatment by potassium citrate in about six weeks.

## Comment.

This is the third case of this kind that I have seen within the last few years. The other two cases were reported in THE MEDICAL JOURNAL OF AUSTRALIA, December 2, 1935. In the first case, that of a girl, the course of

events was very similar to those reported here. The anuria followed within a few days of the removal of an appendix; but the trouble in this case appeared to be only on one side and when the obstruction on this side had been overcome, the other kidney commenced to function; in other words there appeared to be a true reflex anuria. In the present case, however, the drainage of the pelvis on the one side was not sufficient, and both kidneys had to be dealt with. The cause of the obstruction was not determined in either case. The fact that it was impossible to distend the bladder owing to its firm contraction seemed to point to some disturbance of the neuro-muscular mechanism. In the other case reported, that of a male child, the condition did not follow any operation, and the removal of the obstruction on the one side was sufficient to bring about normal functioning of the other kidney. I have heard of a similar case which occurred after the removal of an appendix, and in which the child recovered after both kidneys had been decapsulated. I understand that in this instance both kidneys were firmly squeezed after the decapsulation.

## Reviews.

## CHILDREN'S DISEASES.

THE third edition of Garrod, Batten and Thursfield's "Diseases of Children" inevitably contains much that is new and much that is rewritten as compared with previous editions, although the excellent general arrangement, and in some instances the actual phraseology, of these editions is little disturbed.<sup>1</sup> The introductory observations on heredity and immunity present the facts and hypotheses associated with these subjects. The importance of blood transfusion as a therapeutic measure during recent years is stressed and the indications, dangers, difficulties and methods are clearly detailed. A useful practical point of putting the needle into the donor's vein with the opening downwards and thus avoiding the usual cause of failure to tap the blood is worthy of note. The section dealing with the affections of the nasal accessory sinuses is considerably elaborated as compared with previous editions. The authors draw attention to the fact that sinus infection is responsible for a good deal of ill-health in childhood. They point out that the term "adenoid facies" is often erroneously applied to the facial appearance of nasal obstruction, which more commonly results from inflammation set up by nasal discharge derived from the sinuses. Thus nasal obstruction, mouth-breathing and snoring are common accompaniments of sinusitis, whether tonsils and adenoids have been removed or not. The "Inborn Errors of Metabolism" are, as in previous issues, efficiently handled by Sir Archibald Garrod, one of the original editors, and there are considerable additions to the section dealing with the errors of lipid metabolism. The amplification of the chapters on the newly born baby and on the teeth adds considerably to the interest and usefulness of the book. In regard to rheumatism, the authors hold that there is no serious rival to the streptococcal hypothesis concerning the aetiology, though probably no one particular strain is responsible. They consider that the allergic factor certainly warrants careful consideration, though as yet there is no direct evidence that it can account for the pathological changes which occur in the heart and other tissues. The more recent virus work is not included. It is pleasing to note that the authors do not follow the fashion in some quarters of decrying the use of salicylates in the treatment of rheumatism.

<sup>1</sup> "Diseases of Children": Third Edition, with contributions by 26 authors, edited by H. Thursfield, D.M., M.A., F.R.C.P., and D. Paterson, M.D., F.R.C.P.; 1934. London: Edward Arnold. Royal 8vo, pp. 1163, with illustrations. Price: 50s. net.

There are certain books which, from the reliance that can be placed upon them and the help that can be gained from them, may be regarded as the foundations of the medical man's library. The original edition of Garrod, Batten and Thurstield's "Diseases of Children" is such a book and the present edition is a worthy successor.

#### A BOOK FOR PROSPECTIVE MOTHERS.

A LITTLE book, "Preparing for Motherhood", by Sister Muriel Peck, is one that the general practitioner will welcome for his prospective mothers.<sup>1</sup> It is a most complete work and gives all the information that a mother needs about her own well-being and the future happiness of her infant. The advice given is sound, and the parts which doctor, nurse and mother should play in antenatal treatment are clearly delineated. The chapters on the nursery and its furnishings are particularly good, and Sister Peck writes for all classes, both rich and poor. We feel sure that this work, when known, will have a ready sale.

#### A TEXT BOOK IN PHYSIOLOGY.

THAT distinguished physiologist, John James Rickard Macleod, had already attained an outstanding position in the field of carbohydrate metabolism when he became Professor of Physiology at Toronto in 1918, and it was very appropriate that the discovery of insulin should have been made in his laboratory. In 1928 he was appointed to the chair of physiology at the University of Aberdeen, where he continued his researches and stimulated others to similar investigations. "Unhappily he fell a victim to an obstinate and crippling arthritis", writes J.B.C. in a recent issue of the *Biochemical Journal*. "He bore his disabling and most painful affliction with the greatest energy and fortitude and continued to direct the work of his department long after he was forced to give up active participation in it." In such circumstances the work of preparing a new edition of his book must have been arduous indeed.<sup>2</sup> The work of revision was completed early in 1935, when his health was gradually becoming worse. Pleurisy, and later pericarditis, set in and he died on March 16, 1935, shortly after the publication of his book. "Physiology in Modern Medicine" is the seventh edition of a text book which first appeared in 1918, under the title "Physiology and Biochemistry in Modern Medicine." The new preface states that the word "biochemistry" has been removed from the title because the subject to which it has been applied has expanded greatly and has now become a science ancillary to, rather than a part of, physiology in its application to medicine. Biological chemistry is included in the book only so far as it is necessary to the elucidation of the problems of animal function. The purpose of the book, when first published, was to serve as a guide to the clinical application of physiology and biological chemistry. In 1918 there was no text book of physiology in which particular emphasis was laid upon the application of the subject in the routine practice of medicine. The student who had spent the first three years of his medical course in laboratory work, following the scientific method of accurate observation and correlation of facts, found that when the clinic was reached, the methods of the scientist

were not infrequently cast aside, and disease was studied by the empirical method. Macleod's book was intended to bridge the gap between laboratory and clinical studies, to supplement the existing text books of physiology and to deal with the application of modern knowledge of physiology to disease. The idea was an excellent one and full credit must be given to Macleod for originating a very useful type of text book. It achieved considerable success. Since that time, however, several text books of advanced or applied physiology have been published, and for various reasons some of these have been much more successful and useful than Macleod's book.

The present edition is in the form of a symposium. Macleod rightly recognized that modern science has advanced so rapidly that one man can no longer take all physiology for his province. One feels in reading his book that perhaps one book should no longer take all physiology for its province. The book is too diffuse—one might almost say rambling—to serve as a text book for examinations, and it is not sufficiently authoritative to rank as a standard book of reference. The diagrams are good and for the most part well reproduced. Some of the photographic plates are rather poor and the type is uneven in places. There is a small but carefully selected bibliography.

On the whole, "Physiology and Modern Medicine" is not in the front rank of physiology text books. But there are various ways in which personality survives; Macleod will live in the memory of the colleagues and assistants whose work he inspired and who have written of his unflinching cheerfulness, kindness and patience. Their tributes are a better memorial than this book.

### Notes on Books, Current Journals and New Appliances.

#### THE PROCEEDINGS OF THE MEDICO-LEGAL SOCIETY OF VICTORIA.

THE Medico-Legal Society of Victoria has issued a book of its proceedings for the years 1931-1932 and 1932-1933.<sup>1</sup> During the former period Mr. Justice McArthur was President, and during the latter, Dr. C. H. Mollison. The Society has for its object the promotion of medico-legal knowledge in all its aspects. Membership is open to legally qualified members of the medical and legal professions and to certain other persons who may be elected in a manner set out in the constitution. A society such as this will be of interest to many members of the medical profession; the example of Victoria may well be followed in other States. Incidentally it may be noted that the Victorian Society is affiliated to the British Medico-Legal Society. Some of the articles are of considerable interest and deserve a wider publicity among medical practitioners and lawyers than will be achieved by this book, which is "for circulation among the members of the Medico-Legal Society of Victoria". Dr. R. S. Ellery has contributed an article on "The Plea of Insanity". This is followed by an interesting discussion and the editors have included, by special permission of Mr. Justice Owen Dixon, portion of his charge to the jury in the case of *The King v. Bertram Edward Porter*—"an authoritative exposition of the criminal law of insanity". Mr. R. G. Menzies, K.C., writes on "Professional Confidences", and Mr. C. Gavan Duffy on "The Doctor in the Witness Box". Among other contributions are: "Ethics of Abortion", by Dr. A. E. Brown, and "Testamentary Capacity", by Dr. C. G. Godfrey.

<sup>1</sup> "Preparing for Motherhood", by M. A. Peck, S.R.N.; 1935. Melbourne: Fitchett Brothers. Demy 8vo, pp. 72. Price: 1s. net.

<sup>2</sup> "Physiology in Modern Medicine", by J. J. R. Macleod, M.B., LL.D., D.Sc., F.R.C.P., F.R.S., assisted by P. Bard et al.; Seventh Edition; 1935. St. Louis: The C. V. Mosby Company; Melbourne: W. Ramsay. Royal 8vo, pp. 1186, with 297 illustrations, including seven plates in colour. Price: 52s. net.

<sup>1</sup> "The Proceedings of the Medico-Legal Society of Victoria During the Years 1931-1932, 1932-1933", edited by J. V. Barry and A. E. Coates; 1935. Melbourne: Brown, Prior and Company. Demy 8vo, pp. 172.

## The Medical Journal of Australia

SATURDAY, JANUARY 4, 1936.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: Initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction, are invited to seek the advice of the Editor.

### THE SOCIAL ASPECTS OF MEDICINE.

THE old apprenticeship system of medical training had much to recommend it. The student learned his medicine at the hands of one who was coming into daily contact with disease; he gathered his clinical acumen at the patient's own bedside. He was able to see the effects of his remedy on the patient in the surroundings in which the illness was contracted and in which the patient would remain when the doctor had cured him and would call no more. His patient was not taken from a home, possibly not clean or ill-kept, and put into a hospital ward that was scrubbed with antiseptic soap; he was not surrounded by nurses in spotless uniforms, nor by walls gleaming with glazed tiles. He was not paraded in a long queue in an out-patient department, entered with a number at a desk, supplied with a card coloured blue or buff, ticketed as "medical", "ophthalmic", or what not, and told to attend on Tuesday at two of the clock. Doctor and patient met more often than not either in the consulting room or in the cottage, and the sick man was a patient and not a case. He was an individual to be known, to be understood.

Stricken by disease, possibly he was credited with a certain diathesis; he had a constitution that, with the helping hand of Nature and the doctor's physic, did wonders for him. But medicine has advanced; we have done our best to make it a science—and no doubt rightly. Disease has been studied in its relation to body tissues. Organisms have been discovered and Koch's postulates have been satisfied. The reactions of the body to infections have been examined and we can describe the histological changes produced by different diseases. We have noted the chemical changes associated with disease and we have ventured into the unknown realms of immunity. We have done these things with the aid of the bacteriologist, the pathologist and the physicist, and with commendable zeal we urge them to further activity. At the same time we should ask ourselves whether we have not lost our perspective, whether we have not forgotten the patient as the central figure round which all our theories and plans of treatment should be formed.

There is no doubt that there has been a general tendency towards the academic in both medical teaching and medical practice. The tendency has been recognized and efforts have been made to counteract it. In the literature, particularly from America, numerous articles have been published on the social aspects of medicine and on the need for the training of students and young graduates so that these aspects will not be forgotten. For example, it is quite simple to order a change of climate for a middle-aged man on the basic wage who has a family of young children to support; it is not so simple to arrange the change. The same difficulty arises with a woman who is suffering from arterial hypertension and who should have light work and freedom from emotional strain, but who has children, household duties of her own, and no financial resources. The student trained on academic lines will order the academic treatment without thinking of the economic difficulties. From America comes an account of a plan evolved at the Beth Israel Hospital known as "medical social ward rounds".<sup>1</sup> The plan of teaching in these rounds consists in "correlating the purely medical

<sup>1</sup> Archives of Internal Medicine, August, 1935.



aspects of a disease with an interpretation of the significance of the disease and its treatment in the life of the individual patient". Special emphasis is placed on "the formulation of specific objectives for the care of patients". Classes of from three to nine students are held and instruction is given conjointly by a medical instructor and a medical social worker. Each seminar includes: (i) a review of the medical aspect of a certain disease, (ii) a discussion of general objectives for the care of patients with the disease under consideration, (iii) the presentation of several patients suffering from the disease, (iv) a discussion of the specific means of achieving the objectives outlined, (v) a recapitulation of the salient factors. This plan of the Beth Israel Hospital is quoted merely to show to what lengths academic organization may go to correct an anomaly or to supply a deficiency. Social conditions in America may demand such an arrangement; we do not know whether they do. In Australia it would be superfluous and would make for over-emphasis. If teaching is too academic, if in an out-patient department too much attention is paid to the clinical manifestations of disease and not enough to the patient—to his social as well as to his psychological and bodily condition—the fault lies with the teacher.

If teaching in any medical school is faulty, the fault will be revealed in the attitude of students at examination time and in their subsequent treatment of patients while they are serving as resident medical officers. Thus examination of students and their subsequent attitude to their patients become to a certain extent an examination of teachers and their methods. Most attention may probably be paid to the social aspect of medicine in the out-patient department. Hospital boards therefore need to be particularly careful in making appointments to their out-patient staffs. Other factors being equal, it will always be wise to appoint to the staff one who has spent some years in private practice, particularly in an industrial community. To engage in general practice among those who are not well-to-do is the best way to learn how to apply scientific treatment with compassionate understanding and common sense.

## Current Comment.

### THE CONDITION OF THE STOMACH IN PERNICIOUS ANÆMIA.

So much has been written about the pathology and physiology of the stomach with regard to its hæmopoietic function that it would almost seem that there is very little fresh to say. But the subject is far from being worked out, for even the histological lesions have not been completely studied owing to the difficulty of obtaining material other than from severe and fatal cases. C. M. Jones, E. B. Benedict and A. O. H. Hampton have recently published the results of an investigation into the variations in the mucosa in pernicious anæmia, their material being derived from gastroscopic studies, and from some specimens removed through the gastroscope or by laparotomy.<sup>1</sup> They point out that the nature of the lesion of the gastric mucous membrane is considered to be a diffuse inflammatory process which leads to the destruction of the gastric glands and a state of atrophy. The achlorhydria is of course known to be not only a constant finding on gastric analysis, but is persistent, not altering even if treatment is in other regards quite successful. It has been assumed by most writers that the coincident gastritis is equally constant, and that it represents a primary lesion. If the work of Jones, Benedict and Hampton is confirmed, we are to believe that atrophy of the stomach is a particular accompaniment of the disease in its periods of relapse, that it is not invariable, and that it may remit as the disease remits.

The number of cases studied in this series is of necessity small, but the observations made on the five patients available have been made serially, over a period of months or years. The flexible Schindler gastroscope was used, and in addition a careful radiological study was made of the cases, a compression technique being used which displayed the mucosal markings of the stomach. In one case a suspicious area was demonstrated, and when the patient had sufficiently improved in condition to permit of safe exploration, a laparotomy was performed. A long polypus was found and widely removed; section proved it to be benign. The remainder of the stomach was found to be in an atrophic state, confirming the findings by gastroscopy, which are apparently distinctive. It is interesting that this patient was reexamined later, when it was found that the condition of the mucosa had greatly improved, and at a time when the patient's blood count was satisfactory the stomach was seen to have lost the pale greenish atrophic appearance, and to display the usual rosy tint of health. In another case more extensive polyposis was found, and laparotomy proved that no surgical procedure could give relief, since the

<sup>1</sup> *The American Journal of the Medical Sciences*, November, 1935.

whole of the mucosa was polypoidal in type. This patient was under observation for a number of years, and when finally reexamined the stomach showed little departure from the normal as judged by the appearance of its lining.

The authors summarize their results as follows. As above pointed out, they do not regard atrophic gastritis as an absolutely invariable lesion in pernicious anæmia, nor do they find that the degree of atrophic change is in itself constant. They believe that it is during a relapse that such changes are most characteristically seen, and that the stomach has a considerable capacity for recovery as the disease remits. They have also observed hypertrophic gastritis during a relapse in pernicious anæmia, as judged by radiographic standards. It is their opinion that both atrophic and hypertrophic changes tend to disappear with successful treatment, and they suggest that this improvement in the stomach represents an epithelial change associated with the supplying of a specific deficiency rather than the healing of a chronic inflammatory process. When a hypertrophic state is observed to return to normal, they think there is possibly a subsidence of a true gastritis. It certainly seems likely that any reparative change is only surface in nature; at least it does not in any way affect the blood-forming function of the stomach, for this has not been observed to recover in this disease. Once an established pernicious anæmia appears, the patient must maintain treatment for the rest of his life if he wishes to remain in good health. Assuming that the loss of acid secretion by the stomach and the loss of the natural hæmopoietic factor and perhaps also of the hypothetical neuro-poietic factor in some cases run parallel in the main, the external appearance of the gastric epithelium appears to give little indication of its power to supply these substances. It will be remembered also that a stomach tissue that is potent in the treatment of pernicious anæmia must represent the whole thickness of the wall of the organ. There is a promise implicit in all the work on this subject that the puzzle is being rapidly pieced together, and that we shall then understand some of the obscure features of pernicious anæmia, such as the genesis of the disease.

#### ASTHMA AND SINUSITIS.

PROBABLY it would be better for the general public if the word "catarrh" were removed from the common vocabulary, for it appears to connote something dire and relentless in the layman's mind. It is impossible for a trained medical practitioner to know clearly what some of these terms mean to the laity, if anything, but "catarrh", in one restricted sense at least, is used to describe a chronic inflammation of the naso-pharynx and accessory sinuses. In Australia the importance of accessory sinus disease has been recognized for a long time, and it has been pointed out in reviews appearing in

these pages from time to time that sinusitis has not received the attention it warrants as a cause of chronic diseases of the whole respiratory tract, not to mention its relation to ophthalmic disorders and other chronic infective states.

One of the conditions in which sinusitis may be an important ætiological factor is asthma. About this there have been arguments between the rhinologist and the allergist, the one contending that nasal and paranasal hyperplasia and infection cause the asthma, the other that the allergic state brings about a chronic turgescence of the mucous membranes of the nose. In truth there is much to be said on both sides. It would be unjustifiable to interfere with an engorged turbinate if appropriate treatment could cure it otherwise; but it would be equally unwise to fail to give adequate surgical treatment to, say, the maxillary sinuses once their lining has become polypoidal and chronically infected. R. A. Cooke and R. C. Grove have studied the relation of asthma to sinusitis, with special reference to the results from surgical treatment.<sup>1</sup> They regard the sinuses as an important primary focus of infection and state that of 688 cases studied and recently published by Cooke, only 15% were found to be due to sensitization to external allergens. They claim further that infection was the sole cause of asthma in 34%, and that of 248 cases of "infective" asthma beginning after the patient was ten years of age, sinusitis was a factor of ætiological importance in 92%. These percentages are a bold challenge. The authors believe that "infective" asthma is the result of an allergic reaction to bacteria or bacterial products, and adduce in favour of this idea the well known frequency of a history of allergy in the families of these patients. They also draw attention to the associated allergic phenomena, the eosinophile response of the mucous membranes, and the reproduction of asthmatic attacks by injections of vaccine. It is, of course, not certain that these known facts stand in this causal relation, but the importance of the infective factor is certainly emphasized by these considerations. The authors have not found the cutaneous or intradermal tests for bacterial sensitivity of any real value in determining whether a given organism was the cause of the attacks. They claim 70% of improvements in patients treated surgically, and lay great stress on the need for completeness of the treatment. This, of course, seems logical, but thorough surgical treatment of a severe sinusitis is no light matter. They point out that improvement was not immediate, the delay being no doubt due to the gradual resolution of infective states in the drainage glands and related parts of the respiratory tract.

Balance and judgement are needed in such cases; neither neglect nor over-enthusiasm will help to clear up the relationship of sinusitis to asthma, and, what is more important still, neither will help the patient.

<sup>1</sup> *Archives of Internal Medicine*, October, 1935.

## Abstracts from Current Medical Literature.

### RADIOLOGY.

#### Schüller-Christian's Disease.

GOSTA JANSSON (*Acta Radiologica*, January, 1935) describes a case of Schüller-Christian's disease in which, in addition to the characteristic defects of the cranial and thigh bones, destruction of a thoracic vertebra was present. The xanthomatous spondylosis was accompanied by a paravertebral shadow formation, exactly resembling the gravitation abscesses occurring in tuberculous spondylitis. This shadow in xanthomatous spondylosis is due to a paravertebral accumulation of lipid granulation masses.

#### Cholesteatoma.

LEWIS J. FRIEDMAN (*American Journal of Roentgenology*, July, 1935) states that the growth of a cholesteatoma is very insidious and produces no symptoms until mechanical pressure results by the invasion of the tumour. When it occurs in a diseased mastoid, the aural discharge persists for years. Röntgenologically, cholesteatoma is of interest when the lesion involves the cranial bones. The defects produced by this tumour are clear-cut, punched-out areas of decalcification with dense trabeculae separating the destroyed areas. The mass appears somewhat polycystic and fairly well circumscribed. The lesion is invasive and destructive, but does not expand the tables of the skull. The extent of the tumour within the cranium cannot be ascertained, in view of the absence of calcium in the invading growth. The following pathological processes may closely resemble a primary cholesteatoma in a skiagram: metastatic cancer, sarcoma, myeloma, tuberculosis, xanthoma, *osteitis fibrosa cystica*, giant cell tumour, haemangioma and septic osteitis. Metastatic cancer, sarcoma and myeloma occur as multiple, small, clear-cut areas of rarefaction in several parts of the skull. Primary sarcoma of the skull, while also extensively osteolytic, reveals, as a rule, hyperplasia of osteoid tissue in the invading growth. Tuberculosis causes marked local halisterosis with irregular hazy borders. The secondary type of cholesteatoma may have to be differentiated from a resected mastoid, and a mastoid or perisinuous abscess. In either case the history is important. In a mastoid or perisinuous abscess the area of rarefaction is marked in the centre and the borders are hazy. In cholesteatoma the rarefied area is definitely circumscribed. Xanthoma or Schüller-Christian's disease is characterized by an extensive decalcification without cyst formation. As a rule the disease involves the parietal and sphenoid bones, causing an exophthalmos. *Osteitis fibrosa cystica* and giant cell tumour are expansile

growths, more commonly found near a suture. The cortex is invariably preserved. A haemangioma very closely resembles cholesteatoma and is rather difficult to differentiate radiographically. Palpation, however, will readily reveal the difference, in view of the fact that a blood tumour is a soft, expansile and often pulsating growth as compared with the irregular and resisting mass of the cholesteatoma. Septic osteitis of the skull is seen as a small irregular area of decalcification with multiple sequestra, which appear quite dense.

#### Recent and Old Injuries to the Supraspinatus Tendon Attachment.

LUCAS S. HENRY (*American Journal of Roentgenology*, April, 1935) concludes that there is definite X ray evidence of laceration and evulsion of the supraspinatus tendon attachment in old injuries, and frequently some evidence in recent injuries. The recent injury is characterized by very fine spicules of thin bone or loosened periosteum projecting from the tuberosity, when seen in relief. Occasionally a thin disk of bone is seen representing the evulsion of the whole attachment site. These changes are essentially the same as may be produced at the point of laceration or evulsion of any tendinous attachment in any part of the bony skeleton. There is a rapid atrophy or loss of density of the trabeculae beneath and near the point of separation, and then there is an appearance of irregular areas of increased density. In old cases there are three signs which indicate that rupture has taken place. One is atrophy of the trabeculae beneath the base of the bursa, so that the region of the tuberosity is more diaphanous. Another is the appearance of irregular osteitis about the sulcus and the top of the tuberosity; this is due to impingement of the tuberosity on the acromion as the patient endeavours to elevate his arm. A third, in very old cases, is a gradual disappearance of the sulcus, because the tuberosity is slowly absorbed, so that the outline of the articular head is coincident with the outline of the tuberosity. The evidence in older injuries is characterized by bony proliferation and atrophy of the tuberosity prominences. There is in such cases an abnormal roughening (or osteitis) of the greater tuberosity with definite increase in density of the surface of the tuberosity, and at times small, dark, cyst-like areas are distributed about the region of the tuberosity. In all cases presenting the characteristic symptoms of limitation of abduction and external rotation, with tenderness over the tuberosity, stereoscopic antero-posterior views should be made, with views of the other shoulder for comparison, if there is any doubt in the findings on the injured shoulder. These films are made with a soft tissue technique. The arm is placed in adduction and complete external rotation. This throws the greater

tuberosity in relief, so that the site of the insertion of the supraspinatus tendon can be studied minutely for very slight changes which may be present.

#### Bone Changes of Leuchæmia in Children.

JAMES BATY AND EDWARD C. VOGT (*American Journal of Roentgenology*, September, 1935); in discussing the radiological appearances of leuchæmia, state that the most frequent change is a narrow transverse zone of diminished density just proximal to the metaphysis of the long bones. This in their experience has varied from two to five millimetres in width and was most pronounced in bones in which growth was rapid, as, for example, in the lower ends of the femora and fibulae. It was found in 80% of the cases of myeloid leuchæmia and in 65% of the cases of lymphoid leuchæmia; the causes of its production are not entirely clear. Infiltration and erosion of bone by masses of leuchæmic cells probably play some part, particularly in those instances in which it is most marked. Microscopic sections of some of these bones showed leuchæmic infiltration in the region bordering the metaphysis, but the masses of infiltrating cells were not definitely greater than in other regions. The line of rarefaction is very similar in location and in appearance to the Trummerfeld zone which is demonstrable in skiagrams of the bones in scurvy. The occurrence of this zone of diminished density in these varied disease conditions, each of which is accompanied by a profound metabolic dysfunction, suggests that the rarefaction is produced, in part at least, simply by disturbance of bone growth. This disturbance of bone growth might be part of the general disturbance involving the entire body, or the result of interference in growth locally by infiltrating leuchæmic cells. It seems probable that both factors play a part in producing the change demonstrable in Röntgenograms. Other changes occur, such as generalized osteoporosis, irregular cortical absorption and softening, with or without compression of the spine and fractures in the long bones. The condition has to be differentiated from certain other diseases which at times produce similar changes and with which it might be confused. Neuroblastoma with generalized miliary metastases may simulate rather closely the more advanced changes of leuchæmia. In both diseases the films of the skull may show a diffuse granular mottling, and in both diseases the cranial sutures may be separated as the result of increased intracranial pressure. The pelvis and spine may also give much the same radiological picture in the two diseases. The bones of the extremities should, however, furnish the information necessary to make a differentiation. It is important that the entire extremities be examined, including the phalanges.



In neuroblastoma it is as a rule possible by careful study to demonstrate in some areas small punctate lesions, one millimetre or less in diameter, which are individual areas of absorption around millary metastases. These tend to become confluent, however, and are not well defined. One of the most important points in the differentiation is found in the distal bones of the extremities. The metastases of neuroblastoma involve particularly the proximal ends of the long bones, as the humeri and femora, and much less, if at all, the bones distal to the knees and elbows.

### PHYSICAL THERAPY.

#### The Effect of Hard Röntgen Rays and Gamma Rays of Radium.

D. DEN HOED (*Radiology*, July, 1935) has written a long article on the effect of hard Röntgen rays and  $\gamma$  rays of radium. He quotes all authors who have contributed in this field of the work, and gives extensive references. As is well known, there is no unanimity amongst the various research workers regarding the value of selective wave-lengths in radiation therapy, but it must be remembered that experiments in this field with wave-lengths below 0.1 Angström unit are very few. This worker first used X rays produced at 200 kilovolts constant potential, filtered by 1.5 millimetre of silver, 2.0 millimetres of copper, and 0.5 millimetre of aluminium, narrowing the emitted rays to the spectral range of from 0.06 to 0.12 Angström unit. The silver filter was chosen to eliminate the Wolfram lines, the copper to absorb the silver rays, and the aluminium to absorb the copper rays. Then 360 kilovolts were applied; the two filters were 3.0 millimetres of chrome steel, 2.0 millimetres of tin plus 1.0 millimetre of copper plus 2.0 millimetres of aluminium. Then  $\gamma$  rays of radium filtered by 0.5 millimetre of iron plus 1.0 millimetre of lead were examined. For comparative purposes X rays emitted at 100 to 110 kilovolts filtered by 0.5 millimetre or 1.0 millimetre of copper plus 1.0 millimetre of aluminium were used. Measurements for the determination of quality and quantity are then described. Theoretical and experimental dosimetric comparisons were made with the following phenomena as indicators: (i) mortality of *Drosophila* eggs, (ii) erythema of the human skin, (iii) blackening of the photographic film, (iv) oxidation reduction potential of methylene blue and quinone, (v) oxidation reduction potential of carcinomatous serum. As a result of these tests the author pleads for the theory that in radiation with X rays with a wave-length shorter than 0.1 Angström unit, or with  $\gamma$  rays, no selective chemical, biological or serological reactions in a qualitative sense occur. In a quantitative sense the

conclusions may be drawn for the present that there is a somewhat stronger action of the harder rays for the same quantity of absorbed energy.

#### Neoplasms of the Oral and Upper Respiratory Tracts Treated by Protracted Röntgen Therapy.

WILLIAM HARRIS (*American Journal of Roentgenology*, October, 1935) discusses at length Coutard's technique in X ray therapy, and compares it with the technique which allows the use of thinner filters and high milliamperage. He comes to the conclusion that the method used by Coutard gives more favourable results in malignant disease of the intrinsic and extrinsic larynx. Two treatments are given each day, morning and afternoon, and 200 r are given to each of two fields daily until a dosage of 3,600 r to 4,200 r has been delivered to each field. In thirteen to twenty days, varying with the patient and the site treated, the radio-epithelitis or mucositis appears. This lasts ten to fourteen days. At this time the nutrition of the patient must be carefully watched and measures should be used to aid deglutition and to minimize pain. The radio-dermatitis, or skin reaction, usually closely follows the waning radio-epithelitis or mucositis. "Vaseline" or boric acid ointment is used as a routine for the skin; occasionally "Nupercaine" may be added if the burning sensation is too severe. The skin reaction, like the mucositis, heals in about two weeks if the daily and total doses have not been too large. Fourteen cases of intrinsic and extrinsic carcinoma of the larynx are quoted, seven of which showed no evidence of disease after a period of some months. The author considers that the favourable result of the treatment of these tumours is due to their relative radio-sensitivity, the relatively short distance of tumour from the surface of the body and the use of cross-firing.

#### Irradiation in Carcinoma of the Lip.

IRA J. KAPLAN and SIMON KRANTZ (*American Journal of Roentgenology*, September, 1935) report an analysis of 93 cases of cancer of the lip treated at Bellevue Hospital from 1925 to 1933. Of the patients, 97% were males, and 83% occurred between the ages of forty and seventy years. A history of excessive smoking was given in 78% and a positive Wassermann reaction was found in less than 1%. The form of treatment, as employed in their clinic, has been developed over a period of ten years, as described by Kaplan. Treatment is begun by external irradiation of the lymph glands on both sides of the neck, regardless of whether the lesion is on the right or left side of the lip. For this the authors use high voltage Röntgen therapy, using 200 kilovolts, 4.0 milliamperes, 0.5 millimetre of copper and 1.0 millimetre of aluminium filtration at a 30 centimetre distance. The usual dosage is 200 r given daily for a total dose of 800 r to 1,200 r

to each side. During the course of the local treatment the patient is put into hospital. In the earlier years interstitial radium therapy with removable platinum needles was employed, but more recently a wax mould containing radium tubes is being utilized. When metastatic nodes are present larger doses of Röntgen rays are employed or irradiation is given with the five gramme radium pack. With the latter, 50,000 to 60,000 milligramme hours are given in divided doses at daily intervals. If, with this mode of attack, a total disappearance of the nodes does not occur, the residual nodes are treated either with gold radon seeds or removable platinum radium needles. With this type of therapy there may be complete eradication of the malignant disease, or at any rate the further growth of the nodes is definitely checked.

#### Cancer of Nasal Accessory Sinuses.

FRANCIS L. LEDERER (*Archives of Physical Therapy, X-Ray, Radium*, April, 1935) states that malignant invasion of the sinuses may be active in the hidden osseous recesses long before symptoms draw attention to its possible presence. Malignant neoplasms of the sinuses are characteristically infiltrative and seldom confined to the walls of a given sinus. The term "primary" applied to a carcinoma in a given sinus, especially the antrum of Highmore, is misleading. A tumour-invaded sinus defies a certain definition of the origin of the neoplasm. More inclusive is the description, maxillo-ethmoidal carcinoma. Because of their location, neoplasms of the sinuses present symptoms which do not justify a diagnosis at the onset of the disease. Investigation for purpose of diagnosis should include rhinoscopy, Röntgenological study, and biopsy excision, all of which means frequently fail in determining the type of tumour or the extent of its invasion. Diseases which cause pain, nasal obstruction, cranial nerve disturbances, and swelling about the eye and face, must be borne in mind in making a differential diagnosis. Histologically all forms of epithelial and connective tissue tumours may be found in the sinuses, but the former are in preponderance. Basically, therapy depends upon the histological structure of a tumour, but more decisively upon the rapidity with which it becomes infiltrative and metastasizing. In the light of present knowledge the most adequate management combines electrosurgery with irradiation, first radically removing the neoplasm and its osseous attachments, followed by the application of radium in the surgically removed cavity. Irradiation in itself in the treatment of malignant neoplasms of the sinuses leaves much to be desired. Structures sacrificed in a thorough eradication of malignant growths of the sinuses may be restored by plastic operation or by prosthetic aids.

## British Medical Association News.

### ANNUAL MEETING.

The annual meeting of the Queensland Branch of the British Medical Association was held at the B.M.A. Building, Adelaide Street, Brisbane, on December 13, 1935, Dr. W. N. Robertson, the President, in the chair.

### ANNUAL REPORT OF COUNCIL.

The annual report of the Council was taken as read and adopted, on the motion of Dr. Kenneth Wilson, seconded by Dr. M. Graham Sutton. The report is as follows:

The Council has pleasure in presenting the following report of the work of the Branch for the year ended November 15, 1935.

#### Membership.

The membership of the Branch is 491, as against 493 in 1934. The additions have included: Election of new members, 13; transfers from other Branches, 15; members reelected, 3; members reinstated upon payment of arrears of subscription, 8.

The losses have been due to: Transfers to other Branches, 25; default in payment of subscription, 13; deceased, 3.

The Council regrets to record the deaths of the following members: Dr. Ellen M. Wood, Dr. Cletus McShane and Dr. Auguste Bracer.

#### Meetings.

##### General.

In addition to the annual general meeting, ten ordinary meetings of the Branch were held, of which two were clinical meetings. Three special meetings were held, two of which were to consider the General Medical Services Policy of the Branch, and one to hear papers delivered by members of the Staff of the School of Public Health and Tropical Medicine, Sydney. The average attendance at the ordinary Branch meetings was 30.

##### Council.

Twenty-one ordinary meetings and three special meetings were held by the Council. The special meetings were held to discuss the General Medical Services Policy of the Branch.

The record of attendance of members of the Council was as follows:

#### Ordinary. Special.

Dr. W. N. Robertson (President) .. ..	14	3
Dr. M. Graham Sutton (President-Elect) ..	18	2
Dr. T. A. Price (Past-President and Federal Council Representative) ..	19	3
Dr. L. W. N. Gibson (Honorary Secretary) ..	21	2
Dr. R. G. Quinn (Honorary Treasurer) ..	20	2
Dr. Ellis Murphy (Assistant Honorary Secretary) .. ..	18	2
Dr. Gavin H. Cameron (Chairman of Committees) .. ..	14	2
Dr. Neville G. Sutton (Honorary Librarian) .. ..	16	3
Dr. D. Gifford Croll (Federal Council Representative and Councillor) ..	21	3
Dr. J. Grahame Drew <sup>1</sup> (Councillor) ..	1	—
Dr. Basil L. Hart (Councillor) .. ..	18	2
Dr. F. W. R. Lukin (Councillor) .. ..	14	2
Dr. N. W. Markwell (Councillor) .. ..	20	2
Dr. S. F. McDonald (Councillor) .. ..	14	3
Dr. E. S. Meyers <sup>2</sup> (Councillor) .. ..	4	1

<sup>1</sup> Resigned January 25, 1935.

<sup>2</sup> Resigned May 24, 1935.

#### Ordinary. Special.

Dr. Alex. Murphy (Councillor) .. ..	14	—
Dr. J. G. Wagner (Councillor) .. ..	13	2
Dr. Kenneth Wilson (Councillor) .. ..	12	—
Dr. Bruce Mayes <sup>1</sup> (Councillor) .. ..	14	—
Dr. G. W. Macartney <sup>2</sup> (Councillor) .. ..	7	—

#### Scientific Meetings.

February.—Dr. A. S. Roe: "Clinical Aspects of Nephrectomy."

March.—Clinical meeting, combined with the Brisbane Hospital Clinical Society.

March 27.—Special meeting (members of the staff of the School of Public Health and Tropical Medicine, Sydney): Professor Harvey Sutton, "Pyrexias Difficult of Diagnosis in the Tropics"; Dr. F. W. A. Clements, "Malaria and its Treatment by the Antimalarial Synthetic Drugs".

April.—Dr. J. V. Duhig: "The Causes of Death in Hospital Practice—An Analysis of 380 Hospital Autopsies."

May.—Dr. A. E. Paterson: "Random Jottings of a Post-Graduate Tour Abroad."

May 31.—Joseph Bancroft Memorial Lecture, delivered by Dr. W. J. Penfold: "Medical Research in Australia—Its Development and Future."

July.—Dr. Kenneth Wilson, "Statistical Aspects of Maternal Mortality"; Dr. M. H. Elliot-Smith, "Ante-Natal Care and Obstetric Operations—Their Influence on Maternal Mortality". These papers were arranged by the Obstetrical Section.

August.—Dr. E. S. Meyers: "Some Notes and Comments on Surgical Records of the Brisbane Hospital During the Last Quarter of a Century."

August 30.—Jackson Lecture, delivered by Dr. Neville G. Sutton: "The Treatment of Fractures—An Historical Review."

November.—Papers given by Medical Section on "Some Factors in Nutrition": (1) Introduction, Dr. T. H. R. Mathewson; (2) Diet and Disease in Childhood, Dr. P. A. Earnshaw; (3) Diet and Disease in Later Life, Dr. Clive Sippe; (4) Diet and Disease of the Eye, Dr. E. O. Marks; (5) Endocrine Glands and Nutrition, Dr. S. F. McDonald; (6) Suggested Reforms, Dr. Noel M. Gutteridge.

The following is the personnel of the committee responsible for the arrangement of the programme of papers: Dr. Basil Hart, Dr. N. W. Markwell, and Dr. J. G. Wagner.

*The Royal Australasian College of Surgeons.*—Members of the Branch were invited to attend a lecture given in connexion with the annual meeting of the Queensland Section of the Royal Australasian College of Surgeons on Thursday, August 15, 1935, when a paper was delivered by Professor E. J. Goddard, B.A., D.Sc., "Human Genetics in Relation to Medicine".

#### Office-Bearers.

Dr. M. Graham Sutton was elected President-Elect and Dr. L. W. N. Gibson was elected Honorary Secretary.

The following office-bearers were elected by the Council:

*Assistant Honorary Secretary:* Dr. Ellis Murphy.

*Honorary Treasurer:* Dr. R. G. Quinn.

*Chairman of Committees:* Dr. Gavin Cameron.

*Honorary Librarian and Curator of Museum:* Dr. Neville G. Sutton.

#### Councillors.

In January last Dr. J. Grahame Drew tendered his resignation as a member of the Council, and Dr. Bruce Mayes was appointed to fill the vacancy. Dr. E. S. Meyers, who has been a member of the Council for many years, resigned in May last. The Council placed on record its appreciation of his long and valuable services as a

<sup>1</sup> Elected February 8, 1935.

<sup>2</sup> Elected July 12, 1935.

Councillor. Dr. G. W. Macartney was elected to take the place on the Council occasioned by the resignation of Dr. Meyers.

Dr. Gavin Cameron, who has been a member of the Council for a number of years, is not seeking election for the ensuing year. As Chairman of Committees, Dr. Cameron has rendered invaluable service to the Council.

#### Ethics Committee.

The following were elected members of the Ethics Committee at the annual meeting of the Branch held on December 14, 1934: Dr. Alex. H. Marks, Dr. D. A. Cameron, Dr. G. P. Dixon, Dr. J. B. McLean were reelected. Dr. J. A. Cameron having resigned from the Ethics Committee, Dr. G. W. Macartney was appointed to take his place.

Three meetings were held during the year.

#### Library.

Dr. A. Jefferis Turner has presented a number of books to the library, some of which were passed on to the Downs and South Western Medical Association.

The Branch is now subscribing to the *Quarterly Cumulative Index Medicus*, and a copy of "Knox's Medical Directory for Australia" has been added to the library. We have also received a presentation copy of "Fifty Years of Medicine and Surgery", by Franklyn H. Martin.

Owing to insufficient space in the library it has been decided to install a new bookcase.

In view of the fact that His Majesty the King is Patron of the British Medical Association, a Jubilee copy of his portrait has been placed in the library.

We are indebted to the New South Wales Branch for a copy of a "Handbook for Qualified Medical Practitioners" which has been published by that Branch.

#### Representation.

During the year the Branch was represented as follows:

*Council of the British Medical Association:* Professor R. J. A. Berry.

*Representative Body:* Dr. H. W. Horn, Representative, Dr. W. Graham Oakeley, Deputy Representative.

*Annual Meeting British Medical Association, Melbourne, 1935:* Dr. T. A. Price and Dr. D. Gifford Croll.

*Federal Council of the British Medical Association in Australia:* Dr. D. Gifford Croll and Dr. T. A. Price, who took the place of Dr. E. S. Meyers (resigned).

*Australasian Medical Publishing Company, Limited:* Dr. D. Gifford Croll.

*"The Medical Journal of Australia":* Dr. Joyce Stobo.

*Medical Officers' Relief Fund (Federal):* Dr. W. N. Robertson, Dr. D. Gifford Croll and Dr. J. Cameron Hemsley.

*Queensland Cancer Trust:* Dr. M. Graham Sutton and Dr. B. L. W. Clarke.

*Queensland Bush Nursing Association:* Dr. N. W. Markwell.

*Animal Health Board:* Dr. D. Gifford Croll.

*Standards Association of Australia:* Dr. W. N. Robertson and Dr. E. O. Marks.

*Queensland Medical Board:* Dr. Alex. P. Murphy, Dr. Mervyn S. Patterson and Dr. Kenneth Wilson.

#### Subcommittees.

##### Hospital.

*Personnel:* Dr. N. W. Markwell, Dr. Alex. Murphy, Dr. Neville Sutton, and the *ex officio* members of the Council. Eleven meetings were held and many matters brought up in connexion with individual hospitals were dealt with.

The policy of the Public Hospital System throughout the State has been freely discussed, and appears to be undergoing a definite change. The present policy is to fill positions at country hospitals by full time medical officers, who in most cases are debarred from engaging in private practice. A number of the outlying hospitals are finding difficulty in obtaining the services of reputable medical officers.

At the request of a printing firm, hospital chart forms were revised and brought up to date.

On October 24 an interesting lecture was given by Mr. A. G. Stevenson, consulting architect to various hospitals, entitled: "The Architect and the Hospital", illustrated by lantern slides. The remarks of the lecturer showed the inadvisability of building large and unwieldy hospitals of more than five hundred beds.

#### Rules and Ethical.

*Personnel:* Dr. N. W. Markwell, Dr. Alex. Murphy, Dr. Neville G. Sutton, Dr. Kenneth Wilson, and the *ex officio* members of the Council.

Nineteen meetings of the sub-committees were held, at which the following are the main subjects reported on and ultimately dealt with by the Council:

*Amendment of By-laws.*—Addition of By-law 87a. General Anæsthetics: Carried unanimously at a meeting of the Branch held February 1, 1935. In reply to an inquiry regarding the scope and intended extent of the new by-law, as to whether it covers the administration of chloroform to women in labour or to infants undergoing the operation of circumcision, a reply was sent to the effect that the nurse generally gives the chloroform to the patient in labour under the direction of the doctor in attendance on the case. If an anæsthetic is necessary for a circumcision operation it would probably be wise to have another medical practitioner to administer it.

The necessary steps are being taken for the addition of a by-law regarding "Death Vacancies" to provide for the protection of the practice of a deceased member for a period of six months after the date of re-sale of the practice. The principle underlying this rule is that the deceased estate should have the right to sell the goodwill of the practice and the purchaser should be protected, as he cannot secure a personal introduction.

*Fee for Cremation Certificates.*—It has been resolved by the Council that the fee should be one guinea for each of the doctors issuing the certificate for cremation, and that the doctor who was attending the case should collect his own fee and arrange to collect that of the second doctor.

*Cases of Suicide or Sudden Death.*—In regard to a suggestion made to the Police Department that in all cases of suicide or sudden death the police should make inquiries as to whether the deceased had recently been attended by a medical practitioner, with a view to informing him of the death, a reply was received to the effect that such inquiries should be made by the police.

*Determination of the Point as to when a Medical Adviser Should be Called to Attend Children at a Public Institution in the Event of Illness or Injury to Any of the Residents.*—A determination on this point was requested, and the following ruling was given:

That the doctor be called upon to advise (i) in all cases of bodily rash; (ii) in all cases of bodily illness necessitating a child being detained in bed for more than twenty-four hours; (iii) in all cases of ear or throat conditions accompanied by fever; (iv) in all cases of illness where the general symptoms obviously indicate medical attention; (v) in all accidents, other than those of a trivial nature, and that, if in the event of a serious accident, his services are not immediately available, the matron shall take such action as the circumstances warrant.

*Prescribing of Proprietary Drugs.*—A meeting of combined committees of the Associated Pharmaceutical Committee and the British Medical Association was held recently and a report was presented wherein four recommendations were submitted to be placed before the respective Councils. When finality in this matter has been reached, a copy of the recommendations will be circulated to members of the Branch. The prescribing of proprietary drugs is a subject on which it is very necessary to have a clear understanding between the medical and pharmaceutical professions, and it is also for the benefit of the public that such an understanding should exist.



**Nurses Acting as Dispensers.**—This matter was brought forward by the Pharmacy Board of Queensland, and the Council expressed the opinion that nurses should not dispense medicines, except as a matter of urgency and where no qualified person is available.

**Medical Attendance at Country Women's Association Homes.**—The following ruling was given by the Council:

The Council does not countenance members attending in an honorary capacity people who can afford to pay. The Council has no objection, however, to members attending patients at the Country Women's Association Homes in an honorary capacity who cannot afford to pay, but such patients who are in a position to pay for medical attention should be asked to do so in the ordinary manner.

**Medical Officers of Sporting Clubs.**—Under the by-laws of the Branch members are not permitted to act as honorary medical officers of sporting clubs (By-law 51). Where members act as medical officers of sporting clubs the Council approves of the payment of a retaining fee, provided that fees are also paid for individual cases.

**Sterilization.**—A copy of the Departmental Committee's Report on Sterilization, as presented by the Minister of Health to Parliament by command of His Majesty in December, 1933, has been received from the Federal Council, with an expression of opinion to the effect that the report sets out the position very clearly in regard to sterilization. Particulars with regard to obtaining a copy of the report will be supplied to any member who is interested in the subject.

**The Issue of Circulars by Members Regarding the Sale of a Practice.**—This is not approved by the Council. The usual custom is for the vendor to give a personal introduction to the patients. This ruling was given to a member who inquired regarding the ethical position.

**Formation of Special Associations Within the Profession.**—The Council has approved of the recommendations of a subcommittee appointed by the Federal Council to report on this matter. The subcommittee's recommendations with regard to the constitution of such bodies are that they should (i) conform to the objects of the British Medical Association, (ii) provide that membership of the British Medical Association should be an essential condition, (iii) provide that policy and action in pursuance of that policy should be undertaken in cooperation and through the instrumentality of the British Medical Association, especially when these involve approach to any governmental authority.

**Colonial Mutual Life Assurance Society Limited.**—Medical and hospital service system of insurance: In accordance with an agreement entered into between this Society and the Branch, at the request of the former, the Council has agreed to a discontinuance of the scheme.

**Medical Certificate Forms.**—Medical certificate forms which were submitted by a stationery firm were amended to a more suitable form for setting out the necessary particulars.

**Australian Aerial Medical Services.**—A report was requested from a member practising within the area traversed by the "Flying Doctor", who stated, *inter alia*, that in his own case there was no interference with private practice; and in other districts he does not think this occurs to any extent, as most of the air journeys made are to places remote from any practitioner.

**Locum Tenens—Travelling Time.**—In this connexion it was found upon inquiry that it is the usual custom for the principal to pay the *locum tenens* fees from the time the latter leaves the place of engagement to the time he ceases his work, together with fares both ways and cost of meals when travelling. If an agreement, not in accordance with the above, has been made between the principal and the *locum tenens*, then such agreement would hold good.

**"Consulting Chemists."**—A copy of an amendment of the By-laws of the Pharmacy Board was received with reference to the question of advertising by pharmaceutical chemists. The amendment prohibits a chemist from

advertising that he cures or treats illness or disease in human beings, "nor by advertisement invites persons to consult him in relation to illness or disease, nor hold himself out as qualified to advise on, treat, or cure illness or disease in human beings. . . ."

**Royal Commission on the Investigation of Paralysis.**—With reference to the ethical position of members having been appointed to act in an honorary capacity on the Royal Commission, the Council has stated that it is glad the medical profession is being given an opportunity of investigating the treatment of paralysis, and under the circumstances it does not consider the position of members on the Royal Commission unethical.

#### Public Health.

**Personnel:** Dr. D. Gifford Croll, Dr. F. W. R. Lukin, Dr. G. W. Macartney, Dr. Bruce Mayes and the *ex officio* members of the Council.

Four meetings were held during the year, at which the following matters were dealt with:

**Tropical Hygiene.**—A letter referring to this matter was sent to the Federal Minister of Health.

**Queensland Cancer Trust.**—A request was received regarding material for publication in connexion with the preliminary diagnosis and treatment of cancer, which could be sent out to medical practitioners in the country. A subcommittee was appointed and has the matter in hand.

**A Research Project in Human Nutrition.**—A research project in human nutrition which was submitted by Dr. Noel M. Gutteridge, was referred to a meeting of the Branch.

**Maternal Mortality.**—Dr. M. H. Elliot-Smith represented the Branch and addressed a public meeting which was held on May 1, under the auspices of the Queensland Mothercraft Association.

#### Publicity.

**Personnel:** Dr. Alex. Murphy, Dr. F. W. R. Lukin, Dr. J. G. Wagner, and the *ex officio* members of the Council.

No meetings of this subcommittee were held during the year.

#### Parliamentary.

**Personnel:** Dr. D. Gifford Croll, Dr. J. G. Wagner, and the *ex officio* members of the Council.

No business was dealt with by this subcommittee.

#### Lodge.

**Personnel:** Dr. D. Gifford Croll, Dr. F. W. R. Lukin, Dr. J. G. Wagner, and the *ex officio* members of the Branch.

No meetings were held and all matters relating to lodge practice were dealt with by the Contract Practice Section Committee.

#### Building.

**Personnel:** Dr. D. Gifford Croll, Dr. S. F. McDonald, and the *ex officio* members of the Council.

This subcommittee met only once to deal with the question of a lease for "Bay View".

#### General Medical Services.

**Personnel:** Dr. T. A. Price, Dr. D. Gifford Croll, Dr. N. W. Markwell, Dr. F. W. R. Lukin, Dr. R. G. Quinn, Dr. J. G. Wagner, Dr. L. W. N. Gibson, and the *ex officio* members of the Council.

Nine meetings of the Committee were held during the year, and in addition there were two special general meetings of the Branch and three special meetings of the Council held to discuss the subject of a policy for a general medical service for the Queensland Branch. A copy of suggestions concerning a complete medical service for Queensland was circulated to all members throughout the State and was placed before a special general meeting of the Branch held on December 17, 1934, at which there was an attendance of 116 members. At this meeting the following resolution was carried with two dissentients:

That (subject to the recommendations which were to follow and which were placed before the members in printed form) the meeting records its general approval of the preliminary suggestions concerning a complete medical service for Queensland.

At a subsequent special general meeting of the Branch held on February 8, 1935, at which there was an attendance of 57 members, "The Policy for a General Medical Service" for the Queensland Branch of the British Medical Association was finally adopted, a copy of which had been previously circulated to members. At this meeting the various sections of the proposed policy were dealt with *seriatim* and were carried unanimously, with the exception of one which was carried with two dissentients, and two which were carried each with one dissentient.

The Downs and South Western Medical Association and the Bundaberg Medical Association have both written expressing approval of the policy.

The following organizations of ancillary services have appointed representatives to a conjoint committee: Australasian Trained Nurses' Association, Australian Massage Association, Australian Dental Association, the Pharmaceutical Society of Queensland, the Queensland Private Hospitals' Association, and the Friendly Societies' Medical and Hospital Council.

At a meeting of the conjoint committee which was held on March 22 the following resolution was carried:

That this conference of professions confirms the necessity of formulating a scheme of national medical service, and that all the allied professions cooperate with the British Medical Association to build up a cooperative scheme.

With the object of giving members an opportunity of discussing the policy, meetings of members of the British Medical Association have been held in the various suburbs in the metropolitan area, at which members of the Council have been present to explain the policy and answer questions.

A meeting of lodge secretaries will be held shortly, and, at the request of the Friendly Societies' Medical and Hospital Council, representatives of the British Medical Association will be present to address the meeting on the subject of "The General Medical Services Policy".

Early in October, Dr. T. A. Price addressed the Rotary Club on "The General Medical Services Policy", and the matter has been well ventilated in the public Press.

In March last representatives of the Council interviewed the Home Secretary and outlined the policy of the Branch to him.

By such means an opportunity has been given to those most concerned in the matter of providing an adequate health service for the community to become fully cognizant with the policy of the Queensland Branch, the main object of which is to provide for a family doctor of its own choice for every family, based on lines similar to those of the present friendly societies movement, and other existing health services, with the addition of complete specialist, ancillary and institutional services, and based on a national insurance scheme.

#### Report of Contract Practice Section Committee, 1935.

**Personnel:** Chairman, Dr. F. W. R. Lukin; Honorary Secretary and Treasurer, Dr. J. W. Ralston; Committee, Dr. J. G. Wagner, Dr. A. J. Foote, Dr. J. L. Selwood, Dr. C. E. Tucker, Dr. A. E. Mason, Dr. R. E. Douglas, Dr. C. D. Gillies, Dr. D. V. Sheil, Dr. A. W. St. Ledger, Dr. L. G. Hill, and Dr. J. A. Lynch.

During the year several matters of importance have been discussed, and, with the assistance of the Joint Committee, amicably settled.

**Juvenile Lodge Members.**—Juveniles are now taken on lodge lists after a medical examination and when the joint income of parents does not exceed £312 *per annum*, based on average for three years of assessment of income for Unemployment Relief Tax. There is a compulsory

reexamination at sixteen years. The question of optional acceptance of juveniles by lodge medical officers has not been finalized.

**Medical Referees.**—At the request of the Friendly Societies' Medical and Hospital Council, several medical referees have been appointed to review cases of chronic illness in regard to the issue of sickness certificates to lodge patients.

**Model Lodge Agreement.**—A request from the Friendly Societies' Medical and Hospital Council for a review of the Model Lodge Agreement was received.

**Lodge Patients of Deceased Medical Officers.**—The matter of lodge patients of deceased medical officers has been discussed and will be covered by the proposed amendment to the by-laws of the Branch.

**Lists of Lodge Members.**—The Friendly Societies' Medical and Hospital Council has undertaken to supply new lists of lodge members to the medical officers.

**Complaints.**—Many complaints have been dealt with by the Joint Committee, and most of them were settled satisfactorily.

**Medical Examinations.**—It has been recommended that some standard form for medical examination of lodge patients should be issued by the Friendly Societies' Medical and Hospital Council embracing a *questionnaire* and a physical examination.

**Capitation Fee.**—There has been no alteration in the amount of the capitation fee.

**Lodge Medical Officers' Relief Fund.**—The money subscribed for this fund was returned to the subscribers.

#### Sections for Special Branches of Medical Knowledge.

##### *Eye, Ear, Nose and Throat Section.*

Inaugurated 1924. The following office-bearers were elected at the annual meeting held on November 2, 1934: **President**, Dr. G. Thomson; **Vice-President**, Dr. C. E. Wassell; **Councillor**, Dr. Ainslie Clowes; **Auditor**, Dr. L. T. Jobbins; **Honorary Secretary and Treasurer**, Dr. A. F. Quayle.

Two quarterly meetings were held at the British Medical Association Rooms, one on March 19, 1935, the other on June 18, 1935. Cases of special interest were exhibited and discussed at each meeting.

##### *Surgical Section.*

Inaugurated February, 1927. The office-bearers for the current term are as follows: **President**, Dr. J. M. Thomson; **Honorary Secretary and Treasurer**, Dr. Alan E. Lee; **Committee**, Dr. E. S. Meyers, Dr. L. M. McKillop, Dr. R. G. Quinn.

Two meetings of the section were held during the year, with an average attendance of fifteen members. Papers were read by Dr. L. M. McKillop and (by invitation) Dr. B. L. W. Clarke, on "Carcinoma of the Breast, with Special Reference to Prognosis". At the second meeting a discussion on the *Workers' Compensation Act* was opened by Dr. J. M. Thomson. The members took part in the discussion.

##### *Obstetrical Section.*

Inaugurated November 15, 1927. Two meetings were held during the year—the annual meeting in January and the second in July, held as a combined meeting with the British Medical Association, Queensland Branch.

**Officers:** **President**, Dr. M. H. Elliot-Smith; **President-elect**, Dr. Stanley Waters; **Honorary Secretary and Treasurer**, Dr. L. H. Foote; **Statistical Committee**, Dr. R. G. Quinn, Dr. M. H. Elliot-Smith, and Dr. L. H. Foote.

The annual subscription was reduced to five shillings. At the annual meeting case records of note were read and discussed, and Dr. M. H. Elliot-Smith followed with a short paper on the "Maternal Deaths"—10 from 3,128 recorded cases of the Section. The second meeting was held as a monthly Branch meeting, two members supplying the paper—Dr. Kenneth Wilson and Dr. M. H. Elliot-Smith, on "Maternal Mortality".

The Section has a membership of fifteen who continue to keep statistics of case records; periodically the cases of interest are produced and discussed, the obstetrician concerned being unknown to the meeting.

The section wishes to convey a hearty vote of thanks for the interest and assistance in the past of Dr. M. H. Elliot-Smith, who has left us for Sydney. We wish him every success.

#### Medical Section.

Inaugurated June 1, 1928. *President*, Dr. S. F. McDonald; *Honorary Secretary*, Dr. T. H. R. Mathewson.

No meetings of the Section have been held, but members of the section provided papers for discussion on "Nutrition" at the meeting of the Branch held on November 2. Dr. J. Kempson Maddox, of Sydney, who will be passing through Brisbane in November, will give a lecture on "Cardiac Dyspnoea", and in December Dr. L. J. Jarvis Nye has promised to give a lecture on "Some Recent Advances in Medicine".

#### Radiological Section.

Inaugurated March, 1930. No meetings of the Radiological Section were held during the year 1935.

#### Affiliated Local Associations.

##### Downs and South-Western Medical Association.

Ninth Annual Report for the year ended September 30, 1935: The affairs of the local association have run an uneventful course during the past twelve months.

*Meetings*.—Since the last annual general meeting eight monthly general meetings and one extra general meeting have been held, and five meetings of the Executive. Circumstances beyond our control prevented the holding of the May and August meetings.

The policy has been continued of arranging for meetings at the southern centre of our division in Warwick, though this year fortune has not favoured us in the event. Bad weather hindered Toowoomba members from attending the meeting arranged for July, and the August meeting had to be abandoned owing to the belated discovery that our lecturer was not available.

The last annual general meeting and dinner was a well attended and successful function. We had the pleasure of entertaining representatives of the Ipswich Hospital Clinical Society, the Legal and Dental Professions of Toowoomba, and the Toowoomba Hospital Board. Dr. Bruce Mayes delivered the lecture, dealing with the rôle of the ductless glands in gynaecology.

In October Dr. Frederick Trenerry gave a very interesting address and demonstration at the Commonwealth Health Laboratory, dealing with laboratory technique, some selected organisms of special interest, tests for syphilis, and sections of breast tumours. Our November meeting was occupied with two cinema films showing the technique of blood transfusion, and the operation of breast amputation. In December Dr. Alex. Murphy spoke on goitre. In February Dr. H. Johnson gave a lecture on "Recent Developments in General Anaesthesia". March saw a successful repetition of the combined meeting with the dentists of the district. (Through oversight no mention was made in last year's report of the similar combined meeting held in March, 1934. On that occasion Dr. A. Livingston and Dr. P. A. Earnshaw presented respectively the dental and medical aspects of the subject, "The Relation of Diet to Disease of the Oral Cavity".) This year Dr. N. M. Gutteridge spoke on "Recent Advances in the Pathology of Oral Sepsis" to a gathering representative of the two professions. The April meeting (postponed to May 4) was devoted to a discussion of the Branch "Policy for a General Medical Service" for Queensland. This meeting was attended by twenty-one members representative of town and many country centres. In June Dr. A. S. Roe gave us a helpful talk on "Hæmaturia". In July, at Warwick, Dr. Clive Sippe addressed a meeting on the subject of "Chronic

Non-tubercular Pulmonary Conditions". Tonight Dr. Corlette, of Sydney, visits us once more to speak on the subject of "Wounds". On the whole the meetings have been well attended, the numbers averaging about ten.

*Acknowledgements*.—Once more our thanks are due to the Post-Graduate Course Committee of the State Branch for their kind assistance in providing speakers on the various subjects, as well as to the individual speakers themselves who have given us very generously of their experience and ability. We are grateful, too, for the courtesy extended us by the Toowoomba Hospital Board and Superintendent in connexion with our meetings, and for the supper arrangements. We are also indebted to Dr. Price for the favour of the use of his rooms for sundry meetings, as well as for his advice and assistance in matters requiring contact with Brisbane.

*Membership*.—This shows little change from last year. Our present number stands at twenty-nine financial members.

*Finance*.—The financial position, as will be seen from the statement submitted for your approval, remains satisfactory. Some £7 remain to be carried forward to our credit, bringing this to a total of £33 odd.

*Contract Medical Service Section*.—The routine of the contract medical service has been interrupted by no untoward event, and few meetings of the section have been called. Only three meetings have been held, mostly to deal with routine matters. Some modifications in the method of keeping the records have been introduced to meet the wishes of medical officers of the service for fuller information concerning members on their lists.

*Finance*: The committee has adopted, as they came to hand, the auditor's reports and balance sheets for the periods ending December 31, 1934, and June 30, 1935. These documents are herewith presented for your examination, and for your confirmation of the above action. As will be seen from the statements, the service is still running at a slight loss—some £6 odd for the twelve months ending June 30 last. *Numbers*: The numbers have remained fairly steadily about the 300 level during the last twelve months. The clerk reports that these consist mostly of regular members. *Acknowledgements*: Our thanks are due once again to Dr. T. A. Price for the provision of quarters for the clerical work of the service.

E. BRUCE SMITH,  
President.

J. G. MORRIS BEALE,  
Honorary Secretary and Treasurer.

#### Rockhampton Local Medical Association.

*Annual Report, 1935*.—During the year only one meeting of the above Association was held. The only business was the election of officers for the ensuing year. The following officers were elected: *President*, Dr. D. P. O'Brien; *Vice-President*, Dr. D. E. A. Buchanan; *Honorary Secretary*, Dr. Trevor A. Parry.

TREVOR A. PARRY,  
Honorary Secretary.

#### The Townsville Local Association.

In January a special meeting of local practitioners to finalize arrangements *re* Tropical Medical Conference.

March: Annual Meeting. Election of office-bearers: Dr. V. F. O'Neill was elected President for 1935, Dr. L. Halberstater was elected Honorary Secretary.

On March 13 and 14 a Tropical Medical Conference was held at Townsville in conjunction with the Department of Health, Canberra, and the Tropical School of Medicine, Sydney. Numerous papers were read, and full discussion took place on local and tropical problems. The visitors were entertained by the Townsville Local Association at a dinner and afterwards at the North Queensland Club.

April: Dr. W. J. Chapman delivered a paper on "Some Eye Conditions and their Treatment".

May: A paper by Dr. V. F. R. O'Neill on "Local Problems and their Solution".



June: A combined meeting with the local dentists was held. Dr. Jean Rountree read a paper on "Focal Sepsis". There was a demonstration of dental X ray films. Dr. T. Cotter, Health Laboratory, demonstrated the pathology of Weil's disease. A special lecture, by Dr. R. Graham Brown, Brisbane, was delivered on (a) "Some Aspects of Ear, Nose and Throat Disease", (b) "Abnormalities of the Thyroglossal Tract", (c) "Focal Sepsis in Rheumatism", (d) "Surgery in Laryngeal Cancer". This lecture proved very interesting, and was appreciated by all members.

August: A special meeting was held to arrange for the entertainment of overseas delegates who would be passing through Townsville returning from the annual meeting in Melbourne.

September: A paper by Dr. R. Dungan on "Auricular Fibrillation with Particular Reference to its Treatment with Digoxin".

Entertainment of the overseas visitors was as under: Trip to Magnetic Island, motor drive round city, afternoon tea by Mrs. O'Neill was arranged for the ladies accompanying the delegates, and the delegates were entertained at the North Queensland Club.

All local members are particularly appreciative to the Council for a grant of £15 towards the above entertainment.

October: A paper by Dr. R. E. Murray, of the Commonwealth Health Laboratory, on "Nephritis and the Proposed Method of Investigation".

November: General meeting to take place on the 6th instant.

L. HALBERSTATER,  
Honorary Secretary.

#### Cairns Local Association.

Several meetings were held during the past year of the Cairns and District Branch, Dr. A. M. Langan being President of the Branch. The most important meeting was in March, in conjunction with the Department of Health, the latter being represented by nine members, and at the meetings we had nineteen local members. This conference met with the entire approval of the Local Association, and it was decided that the conference be made an annual event if possible, and tentative plans are being made for a conference in 1936.

In June three very interesting papers were read by Dr. R. Graham Brown, and the Branch put on record their appreciation of Dr. Brown's services, and of the Honorary Secretary in Brisbane in arranging for the meeting.

In May there was a visit from the Editor of the journal, Dr. Mervyn Archdall. This was appreciated by the members, as it is several years since he has been here.

As a result of the conference in March, a registry has been formed in Cairns of injuries caused by plants and animals, Dr. Flecker acting as registrar. This is serving a very useful purpose, and some interesting case reports have been forwarded, which will be reported at a later date.

T. G. HEWITT,  
Honorary Secretary.

#### North Coast Medical Association.

*Annual Report, 1935.*—During the past twelve months the Association has not been as active as in previous years. This has not been due to any waning of interest on the part of the members, but it is the result of an unfortunate combination of circumstances which resulted in the postponement and cancellation of ordinary meetings.

On May 11, 1935, a well attended meeting was held at Nambour, when visitors from as far north as Childers and as far south as Lismore (New South Wales) were present. On this occasion the chief lectures were Dr. P. A. Earnshaw, who read a paper on "Hydrocephalus", and Dr. Alan Lee, who chose "Chronic Appendicitis" as his subject. The thanks of the Association are due to these gentlemen for their continued interest in our institution and in the affairs of the Association generally.

During the period under review the President for the current term (Dr. H. Spencer Roberts) and the Honorary Secretary since the inception of the Association (Dr. H. M. Saxby) have resigned on account of their removal from our area. To both of these gentlemen we offer this expression of thanks for the support which they have always given the Association: we would also wish them every success in their new spheres of activity.

The number of members stands at sixteen, while the honorary membership list totals thirty-one.

A. J. KENNEDY,  
Acting Honorary Secretary.

#### The South Burnett Medical Association.

*Annual Report, 1935.*—This Association was formed at a meeting held in Kingaroy on Saturday, May 4, 1935. It was decided to apply for affiliation with the Queensland Branch of the British Medical Association, and the following office-bearers were elected: *President*, Dr. P. J. McReddie, Nanango; *Vice-Presidents*, Dr. W. J. Saxton, Kingaroy, and Dr. C. T. Underwood, Goomeri; *Secretary-Treasurer*, Dr. R. V. Rickard, Kingaroy.

Other members to join the Association were: Dr. J. C. Thompson, Dr. Jean Stobo, Kingaroy; Dr. R. J. Nash, Wondai; Dr. P. J. Davidson, Murgon; Dr. R. Palmerston Rundle, Proston.

The next meeting was held at Kingaroy on June 15. Cases were shown and discussed. After dinner the draft of a constitution was discussed, agreed upon, and the Secretary was instructed to forward a copy to the British Medical Association Council, Brisbane, for ratification. At this meeting Dr. D. Junk, Wondai, and Dr. S. A. McConnell were invited to accept honorary membership.

Further meetings were held at Wondai on August 10 and at Kingaroy on October 12. On each occasion cases were shown and discussed. On August 10 Dr. Rundle read a paper on "Allergy", and on October 12 Dr. W. J. Saxton gave a brief account of his experiences *et cetera*, at the Melbourne annual meeting of the British Medical Association.

During the coming year it is hoped to hold meetings every six to eight weeks at Kingaroy and Wondai alternately.

Through the Queensland Post-Graduate Committee it is hoped also to secure visits from lecturers to address occasional meetings.

R. V. RICKARD,  
Honorary Secretary.

#### Post-Graduate Committee.

*Personnel of the Committee:* Chairman, Dr. S. F. McDonald; Vice-Chairman, Dr. A. V. Meehan; Honorary Secretary-Treasurer, Dr. H. W. Johnson; Dr. Alex. Murphy, Dr. Ellis Murphy, Dr. E. S. Meyers, Dr. J. V. Duhig, Dr. C. E. Wassell, Dr. Alan E. Lee, Dr. D. A. Cameron, Dr. M. H. Elliot-Smith, Dr. Neville G. Sutton, Dr. P. A. Earnshaw, Dr. H. J. Windsor, Dr. L. M. McKillop, Dr. N. W. Markwell, Dr. K. B. Fraser, Dr. L. W. N. Gibson, Dr. F. W. R. Lukin.

*Meetings.*—During the year 1934-1935 the committee met fourteen times, including thirteen ordinary meetings and one special meeting.

During the year Dr. L. W. N. Gibson tendered his resignation as Honorary Secretary, and Dr. H. W. Johnson was appointed in his place.

Dr. R. E. Douglas resigned from the committee as representative of the Hospital for Sick Children, and Dr. L. W. N. Gibson has been appointed in his place.

Dr. A. V. Meehan, Dr. L. M. McKillop and Dr. K. B. Fraser intimated that they would be absent some months on post-graduate study abroad.

In May this year the Committee held its annual post-graduate course. The membership numbered 67, including seven from the country. Visiting lecturers included Dr.

Harold Ritchie, of Sydney, Mr. Hugh Trumble, of Melbourne, and Dr. W. J. Penfold of Melbourne, who also delivered the Bancroft Oration, "Medical Research in Australia: Its Development and Future". Many interesting lecture demonstrations were given by various Brisbane lecturers, and a great deal of time and trouble was expended in the preparation of these demonstrations, in order to make them as interesting and instructive as possible. The small number of country members enrolling interfered with the attendance at the lecture demonstrations, especially those held during the daytime, but the attendance at the evening lectures was excellent.

During the week the Committee's annual ball was held at the Belle-Vue Hotel, and was even more successful than in previous years.

In February of this year Professor Fraser, of Edinburgh, delivered a lecture entitled "Appendicitis in Children", at the Geological Theatre of the University. The lecture was very successful, and much appreciated by the large audience.

Many visits were made by Brisbane lecturers, under the auspices of the Post-Graduate Committee, to centres outside the metropolitan area, including Toowoomba, Ipswich, Warwick, Nambour and Lismore. These lectures were greatly appreciated by the various local members who attended.

In conjunction with the Queensland Cancer Trust, lectures were given at Bundaberg and Maryborough by Dr. E. S. Meyers and Dr. J. V. Duhig, and were well attended. Dr. R. Graham Brown also delivered lectures at Townsville and Cairns, and letters of appreciation have been received from these centres.

A conference of representatives of various State Post-Graduate Committees was held in Melbourne during the annual meeting of the Royal Australasian College of Surgeons in March last, the Queensland Committee being represented by Dr. Neville G. Sutton and Dr. A. V. Meehan. At the meeting many relevant matters were discussed.

During the year a new projection lens was purchased for the "Kodascope", and doubtless will be of great use for future demonstrations.

HORACE W. JOHNSON,  
Hon. Secretary.

#### Joseph Bancroft Memorial Lecture.

Dr. W. J. Penfold, of Melbourne, delivered the Joseph Bancroft Memorial Lecture on May 31, 1935, at the Geological Theatre of the University of Queensland, on the subject of "Medical Research in Australia: Its Development and Future". At the conclusion of the lecture the Joseph Bancroft Memorial Medal was presented to Dr. Penfold by the President. Representatives of the Board of Faculties of the University and of the Council of the Royal Society were present, and there was also a large attendance of members of the Branch.

#### Jackson Lecture.

The Jackson Lecture this year was delivered by Dr. Neville G. Sutton, the title being "The Treatment of Fractures: An Historical Review".

#### Federal Council.

Two meetings of the Federal Council were held during the year, both of which took place in Melbourne. The first was held on February 23, at which the Branch was represented by Dr. D. Gifford Croll, Dr. E. S. Meyers being unable to attend. In May Dr. Meyers tendered his resignation as a member of the Federal Council, and Dr. T. A. Price was appointed to take his place. The second meeting of the Federal Council was held on September 7, at which both Dr. D. Gifford Croll and Dr. T. A. Price were present.

The Council has placed on record its appreciation of Dr. Meyers's valuable services as a representative of the Branch on the federal body for a number of years.

#### Annual Meeting, British Medical Association, Melbourne, 1935.

The memorable event of the one hundred and third annual meeting of the British Medical Association was held in Melbourne from September 9 to 14, 1935.

The meeting was an unqualified success from a scientific and social point of view, and reflects great credit upon all those responsible for its organization, and particularly the Executive Committee and Dr. J. P. Major, the Honorary Local General Secretary.

The Branch was honoured by the appointment of our President, Dr. W. N. Robertson, as a Vice-President of the British Medical Association. Dr. D. Gifford Croll and Dr. E. S. Meyers were appointed members of the General Committee and General Executive Committee. Four members of the Branch were appointed Vice-Presidents of Sections, and thirty-four members signified their intention, through the Branch office, of being present at the annual meeting in Melbourne.

Dr. D. Gifford Croll and Dr. T. A. Price were elected as delegates to represent the Queensland Branch at the annual meeting.

#### Entertainment of Overseas Delegates.

Two parties of overseas delegates and visitors were entertained by the Branch during their short stay in Brisbane on their return journey from the British Medical Association annual meeting in Melbourne. The entertainment on both occasions took the form of a luncheon party at Mount Coot-tha after the guests having been met at the boat by members who placed themselves and their cars at the disposal of the visitors during their stay in Brisbane. The main feature of the decorations at Mount Coot-tha consisted of quantities of tropical fruits, which were supplied by the Committee of Direction, and were presented to the visitors at the conclusion of the luncheon. The first party arrived on September 17, and the second party, which included the official party, arrived on September 21. At the luncheon party on September 21 there were a number of official guests, including His Excellency the Governor, Sir Leslie Wilson, Lady Wilson, and Miss Marjorie Wilson, His Worship the Lord Mayor of Brisbane, and the Honourable the Home Secretary. The Honourable A. E. Moore, M.L.A., was a guest at the luncheon on September 17. The guests appeared to enjoy thoroughly the informality of the entertainment.

The Council would like to thank all those who were responsible for the arrangements, and particularly the members of the Ladies' Committee. The Council also appreciated the generosity of those members who contributed towards the expenses and made it possible to render financial assistance to the Townsville members who entertained the party travelling by the steamship *Marella* during their stay in that port.

#### Australasian Medical Congress (British Medical Association).

The South Australian Branch has accepted the invitation of the Federal Council of the British Medical Association to hold the Fifth Session of the Australasian Medical Congress in Adelaide in 1937.

#### "The Medical Journal of Australia."

Our representative on the Australasian Medical Publishing Company, Limited, Dr. D. Gifford Croll, has again submitted a favourable report on the affairs of the company. The volume of business received has made it necessary to extend the building and to add to the plant and equipment since last report.

#### Representation on the Central Council of the British Medical Association.

Professor R. J. A. Berry has again been appointed as representative of the New South Wales-Queensland Group on the Central Council of the British Medical Association for a period of three years.

**Medical School for Queensland.**

It is hoped that during the coming year definite steps will have been taken for the establishment of a Medical School at the University of Queensland.

**Finance.**

In February last, at the suggestion of the Honorary Treasurer, Dr. R. G. Quinn, a sinking fund was established to make provision for a future building for the Branch and to adjust the financial position. The sum of £100 was transferred from the General Account of the Branch to the Sinking Fund Account, which has been opened in the Commonwealth Savings Bank.

An appeal was made to members of the Branch requesting donations to the fund, and up to date twelve members have responded by forwarding subscriptions totalling £56 6s. 6d. In addition to this, one member has made a gift of the sum of £50 to the Branch by cancelling

the loan made by him to the Building Fund. Another member has promised to hand over his shares in the Queensland Medical Land Investment Company, Limited, amounting to £50, to the Branch.

The Branch has also purchased the shares in the Queensland Medical Land Investment Company, Limited, to the value of £100, from the estate of a deceased member.

It is intended to make an annual appeal to members to subscribe to the Sinking Fund, as it is felt in this way that the future financial position will be established on a firm basis when the opportunity arises for the Branch to move to a more suitable home.

The financial position of the Branch, so far as the General Account is concerned, is satisfactory, but it is regretted that thirteen members were struck off the membership list for default in payment of subscriptions for 1934, and 48 members still owe their subscriptions for the current year.

**QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).****Balance Sheet as at November 15, 1935.**

LIABILITIES.		ASSETS.	
£	s. d.	£	s. d.
British Medical Association, London—		B.M.A. Rooms, Adelaide Street, Brisbane—	
Balance Subscriptions Account	38 17 9	Library, Book Cases, Furniture, Lantern, Typewriters <i>et cetera</i> .. . . .	287 0 0
Australasian Medical Publishing Company, Limited .. . . .	30 12 6	Museum Specimens .. . . .	5 0 0
Sundry Creditors .. . . .	5 5 0	Queensland Medical Land Investment Company, Limited—	
English, Scottish and Australian Bank Ltd., Brisbane—		4,925 shares of £1 each, paid up to 10s. each, at cost .. . . .	2,462 10 0
Overdraft—Building Fund Account .. . . .	1,731 13 10	Freehold Property, "Bayview", Wickham Terrace, Brisbane ( <i>less</i> Depreciation on Building to November 15, 1935, at 5% <i>per annum</i> ) .. . . .	3,190 0 0
Loans from Members repayable May 15, 1943 .. . . .	4,947 10 0	Furniture in "Bayview" ( <i>less</i> Depreciation to November 15, 1935, at 10% <i>per annum</i> ) .. . . .	220 0 0
Interest accrued to November 15, 1935 .. . . .	123 13 9	Australasian Medical Publishing Company, Limited, Sydney—	
	5,071 3 9	Two Debentures of £25 each and one of £5 .. . . .	55 0 0
Surplus from Dinners, Entertainments <i>et cetera</i> .. . . .	31 17 2	City Electric Light Company, Limited—	
Sinking Fund .. . . .	156 1 6	Deposit Account .. . . .	4 0 0
Accumulation Account—		Unused Stationery Coupons .. . . .	6 5 0
Balance at November 16, 1934	909 8 7	Commonwealth Savings Bank, Brisbane—	
<i>Add—</i>		Credit Balance, Sinking Fund Account .. . . .	156 1 6
Net Surplus from Revenue Accounts, twelve months ended November 15, 1935, being—		English, Scottish and Australian Bank Ltd., Brisbane—Credit Balance, General Fund Account .. . . .	1,945 4 4
General Fund, Surplus .. £504 0 7		Cash in hand .. . . .	3 0 0
<i>Less—</i>			
Building Fund, Deficit .. . . .	44 19 10		
	459 0 9		
	1,368 9 4		
<i>Deduct—</i>			
Amount transferred to Sinking Fund .. . . .	100 0 0		
	1,268 9 4		
	£8,334 0 10		£8,334 0 10

(Signed) WM. N. ROBERTSON, President.  
R. G. QUINN, Hon. Treasurer.

We have examined the above Balance Sheet and have obtained all the information and explanations we have required.

In our opinion the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Association's affairs as at November 15, 1935, according to the best of our information and the explanations given us, and as shown by the books of the Association.

Brisbane,  
November 20, 1935.

R. G. GROOM & Co.,  
Chartered Accountants (Aust.),  
Auditors.



## QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

## Building Fund Statement of Receipts and Payments for Twelve Months ended November 15, 1935.

RECEIPTS.			PAYMENTS.		
	£	s. d.		£	s. d.
November 15, 1935.			November 16, 1934.		
To Rent from "Bayview", Wickham Terrace	308	0 0	By English, Scottish and Australian Bank, Limited, Brisbane—Debit Balance ..	1,546	12 2
" Queensland Medical Land Investment Company, Limited—Dividend, twelve months ended November 25, 1934 .. ..	118	2 6	November 15, 1935.		
" English, Scottish and Australian Bank, Limited, Brisbane—Debit Balance ..	1,731	13 10	By Rates, Land Tax, Insurance and Repairs, "Bayview" .. . . . . .	145	1 9
			" Interest .. . . . . .	249	17 11
			" Sundry Expenses .. . . . . .	16	4 6
			" Queensland Medical Land Investment Company, Limited, Shares—purchase of 200 shares of £1 each paid to 10s. each	100	0 0
			" Amount paid into Sinking Fund .. . . .	100	0 0
	£2,157	16 4		£2,157	16 4

## Statement of Receipts and Payments, Sinking Fund, for period ended November 15, 1935.

RECEIPTS.			PAYMENTS.		
	£	s. d.		£	s. d.
November 15, 1935.			November 15, 1935.		
To amount paid over from Branch Funds ..	100	0 0	By Bank Charge .. . . . . .	0	5 0
" Donations from various members .. .	56	6 6	" Credit Balance at Commonwealth Savings Bank, Brisbane .. . . . . .	156	1 6
	£156	6 6		£156	6 6

## General Fund Revenue Account for Twelve Months ended November 15, 1935.

EXPENDITURE.				INCOME.					
	£	s.	d.	£	s.	d.	£	s.	d.
November 15, 1935.									
To Library Expenditure .. ..	58	11	10						
" Branch Expenses .. .. .	654	12	7				1,222	4	6
" Depreciation, Furniture, Fittings, Typewriters <i>et cetera</i> .. ..	12	17	6						
				726	1	11			
" Surplus of Income over Expenditure transferred to Accumulation Account .. ..				504	0	7			
				£1,230	2	6			
							£1,230	2	6

November 15, 1935.									
By Branch and Organization Fund Subscriptions .. .. .							1,222	4	6
" Australasian Medical Publishing Company, Limited—Interest on Debentures ..							2	15	0
" Sundry Receipts .. .. .							5	3	0
									1,230 2 6
									£1,230 2 6

## Building Fund Revenue Account for Twelve Months ended November 15, 1935.

EXPENDITURE.				INCOME.					
	£	s. d.	£	s. d.		£	s. d.	£	s. d.
November 15, 1935.						November 15, 1935.			
To Rates, Land Tax, Insurance and Repairs "Bayview" ..	145	1 9			By Rent from "Bayview" .. ..	308	0 0		
„ Interest on Bank Overdraft and on Loans from Members .. .. .	246	16 1			„ Queensland Medical Land Investment Company, Limited, Dividend .. .. .	118	2 6		
„ Sundry Expenses .. .. .	16	4 6						426	2 6
			408	2 4	„ Donation, Dr. J. V. Duhig .. .. .			50	0 0
„ Depreciation, "Bayview", Buildings and Furniture .. .. .			113	0 0	„ Deficit transferred to Accumulation Account .. .. .			44	19 10
			<u>£521</u>	<u>2 4</u>				<u>£521</u>	<u>2 4</u>

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).  
Statement of Receipts and Payments (General Fund) for Twelve Months ended November 15, 1935.

RECEIPTS.				PAYMENTS.			
	£	s.	d.		£	s.	d.
November 16, 1934.				November 15, 1935.			
To Credit Balance at English, Scottish and Australian Bank Limited, Brisbane ..			1,509 7 11	By British Medical Association, London: Amounts remitted to London on account of subscriptions collected ..			668 2 0
" Cash in hand .. .. .			3 15 6	" Australasian Medical Publishing Company, Limited, Sydney: Amounts remitted to Sydney on account of <i>The Medical Journal of Australia</i> .. .			528 7 6
November 15, 1935.				" Library Expenditure .. .			58 11 10
To Subscriptions—				" Branch Expenses—			
For remittance to British Medical Association, London	636	17	3	Office Salaries and Honoraria	309	5	9
For remittance to <i>The Medical Journal of Australia</i> , Sydney	503	5	0	Printing and Stationery ..	65	18	3
Queensland Branch Subscriptions .. .	279	7	6	Electric Light .. .	14	2	3
Organization Fund, Queensland Branch .. .	942	17	0	Rent .. .	52	0	0
			2,362 6 9	Cleaning .. .	41	16	4
" Sundry Receipts .. .			6 6 10	Telephone .. .	23	11	3
" Australasian Medical Publishing Company, Limited—Interest on Debentures: £55 at 5% per annum, 12 months to June 30, 1935 .. .			2 15 0	Bank Charges .. £9 0 3			
" Dinners and Entertainment—being subscriptions to Annual Dinner, Council Dinner and Dinner to Sir R. Cilento; also subscriptions to fund for entertainment of overseas visitors .. .			221 19 0	Less—Exchanges refunded .. 6 7 4			
					2	12	11
				Stamps and Telegrams ..	49	6	8
				Audit Fees and Accountants' Services, to November 15, 1934 .. .	15	15	0
				Insurance: Fire and Workers' Unemployment and Compensation .. .	4	7	0
				Renewals and Repairs, Office Furnishings, Electric Light and Balopticon	7	16	9
				Council and General Meeting Expenses, Newspapers and Sundries .. .	24	10	5
				Contribution to Federal Committee .. .	46	8	0
							657 10 7
				" Legal Costs <i>re</i> Lodge Agreement, revision of rules <i>et cetera</i> .. .			17 8 6
				" Furniture and Fittings .. .			24 17 6
				" Dinners and Entertainment—being expenditure on Annual Dinner, Council Dinner and Dinner to Sir R. Cilento; also expenditure entertaining overseas visitors .. .			203 8 9
				" Credit Balance at English, Scottish and Australian Bank, Limited, Brisbane ..	1,945	4	4
				" Cash in hand .. .			3 0 0
			£4,106 11 0				£4,106 11 0

## Social.

On Thursday, May 30, 1935, the annual dinner of the Branch was held at Rowe's Banquet Hall. The guests of honour were Dr. W. J. Penfold, Dr. Harold Ritchie, Mr. Hugh Trumble, and Professor R. Marshall Allan.

The President and members of the Council also entertained the southern visitors at dinner at the Belle-Vue Hotel, prior to the Bancroft Lecture, on Friday, May 31.

Sir Raphael Cilento, Kt., M.D., was entertained at a complimentary dinner given in his honour by the Council and members of the Branch on Thursday, February 21, at the Belle-Vue Hotel.

## General.

Many matters of personal interest were dealt with by the Council during the year on behalf of members of the Branch.

(Signed) WM. N. ROBERTSON, President.  
L. W. N. GIBSON, Honorary Secretary.

## FINANCIAL STATEMENTS.

The financial statements, which are published herewith, were presented and adopted.

## ELECTION OF OFFICE-BEARERS.

The President announced the result of the election of office-bearers and members of the Council.

President: Dr. M. Graham Sutton.

President-Elect: Dr. T. A. Price (Federal Councillor).

Past-President: Dr. W. N. Robertson.

Honorary Secretary: Dr. L. W. N. Gibson.

Members of the Council: Dr. D. Gifford Croll (Federal Councillor), Dr. K. B. Fraser, Dr. Basil L. Hart, Dr. F. W. R. Lukin, Dr. N. W. Markwell, Dr. Bruce T. Mayes, Dr. S. F. McDonald, Dr. Alex. Murphy, Dr. Ellis Murphy, Dr. R. G. Quinn, Dr. Neville G. Sutton, Dr. J. G. Wagner, Dr. Charles E. Wassell, Dr. Kenneth Wilson.

On the motion of Dr. E. S. Meyers, seconded by Dr. M. Graham Sutton, Mr. Roy S. Groom was appointed auditor.

#### Ethics Committee.

It was moved by Dr. R. G. Quinn and seconded by Dr. Neville G. Sutton that Dr. A. H. Marks, Dr. G. P. Dixon, Dr. G. W. Macartney, Dr. Mervyn Paterson and Dr. Gavin Cameron be elected members of the Ethics Committee. This was carried unanimously and the President declared those members elected.

#### INDUCTION OF PRESIDENT.

Dr. W. N. Robertson then inducted the new President, Dr. M. Graham Sutton, to the chair.

#### PRESIDENT'S ADDRESS.

Dr. M. Graham Sutton read his president's address.

#### VOTES OF THANKS.

Dr. W. N. Robertson moved a vote of thanks to Dr. Sutton for his very able address. Dr. Robertson thanked his colleagues on the Council for the very great assistance they had given him during the year. He proposed a vote of thanks to Mrs. Spooner for her very able work, and also to the Honorary Secretary, Dr. L. W. N. Gibson.

#### SCIENTIFIC.

A MEETING of the South Australian Branch of the British Medical Association was held at the Anatomy Lecture Theatre, University of Adelaide, on September 26, 1935, Dr. D. W. R. COWAN, the President, in the chair.

#### Relationship of Vitamins to Normal Health.

MR. MARK L. MITCHELL read a paper entitled: "The Relationship of Vitamins to Normal Health" (see page 7).

Dr. E. McLAUGHLIN said that, although it was usually considered that vitamin A deficiency was uncommon in Australian cities, the skin lesions now believed to be an early sign of such a condition could be demonstrated in a relatively high proportion of subjects suffering from defective gastric secretory function. He believed that in many cases two factors were involved: deficient diet, usually taken because of digestive discomfort, and defective alimentary absorption.

PROFESSOR C. S. HICKS pointed out that a megalocytic anemia was not found in pellagra, allegedly a vitamin B<sub>3</sub> deficiency disease, in which, however, only liver, containing considerably more than vitamin B<sub>3</sub>, had proved effective in treatment. In fact, vitamin B<sub>3</sub> prepared from anything other than yeast was ineffective in pernicious anemia.

Dr. D. R. WALLMAN asked Mr. Mitchell whether he knew of any work having been done in congenital cases of ichthyosis with relation to their gastric acidity, as it seemed to Dr. Wallman a possibility that these patients would be found to be hypochondriacs.

Dr. W. C. T. UPTON stated that he had used dilute hydrochloric acid and cod liver oil internally in the treatment of ichthyotic subjects, but had not been able to detect any improvement in the skin condition. No local applications were used during this period.

Dr. D. R. W. COWAN added his thanks to those of the other speakers for the splendid paper read by Mr. Mitchell. It had been his earnest desire to see the closest cooperation between the university teaching staff and members of the practising profession; he felt that much good must come from such meetings as this. The medical profession was inclined to think in terms of disease rather than of good health, and such discussions as this, which stressed the importance of proper dieting in relation to normal

health, were particularly appropriate. With the threat of national insurance hanging over them, it was necessary for the medical profession to tighten up their preventive medicine organization.

Dr. L. W. LINN congratulated Mr. Mitchell on his interesting paper. He was especially interested in Mr. Mitchell's comments on the skin lesions which occurred with a vitamin A deficiency. Barber, of Guy's Hospital, contended that many cases of chronic eczema in elderly people were caused, or at least aggravated, by a deficiency of vitamins in the diet and claimed very good results by giving these patients cod liver oil and a diet rich in vitamins.

#### NOMINATIONS AND ELECTIONS.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Broadbent, John Hayley, M.B., B.S., 1933 (Univ. Sydney), Royal Hospital for Women, Paddington.  
Murphy, Eileen Mary, M.B., B.S., 1929 (Univ. Melbourne), c/o Dr. Marion Fox, Narooma, South Coast.

THE undermentioned have been elected members of the Victorian Branch of the British Medical Association:

Sweeting, John Stretch Deane, M.B., B.S., 1934 (Univ. Melbourne), Herbert Street, Morningside.  
Outhred, Kenneth Gilbert, M.B., B.S., 1934 (Univ. Melbourne), Royal Melbourne Hospital, Melbourne, C.I.

#### Correspondence.

##### FIRE-WALKING.

SIR: Just a hurried line to say that my remarks in my letter to THE MEDICAL JOURNAL OF AUSTRALIA of November 16 have been fully corroborated by a letter from Leonard Hill in the *Listener* of October 16, if it is not making an apparent *fausse démarche* to use an earlier statement to substantiate mine.

Since my letter appeared, old residents in India have told me of their ayah picking up red-hot cinders, and of coolies "stamping out red-hot camp fires", and so on. Apparently the skin being dry is an important feature; my father saw our late King, when Prince of Wales, carry out that astonishing act of dipping his hand into molten lead, His Highness's fingers being carefully dried with a warm silk handkerchief first.

Approximately, each foot is half a second in contact with hot stones or charcoal (especial kind of stones used in Fiji and pure charcoal in India) and the same time cooling in air. When wrecked upon the Barrier Reef years ago, I was the only one (crew and passengers) that could walk about the coral surface; when farming in New Zealand it was the local custom not to wear boots until after mid-day.

Yours, etc.,

ARTHUR J. VOGAN.

58, Cliff Road,  
Northwood,  
New South Wales,  
December 9, 1935.

*Post Scriptum.*—A local blacksmith tells me that apprentices, at first, "being afraid" of hot iron, cannot handle it, but presently find it possible. Fear causing sweating? A.J.V.



## CLINICAL OBSERVATION ON BLOOD PRESSURE.

SIR: Dr. R. Southby has recently directed the attention of many to the possible significance of the disparity between the blood pressure readings in the two arms. After hearing his interesting and provocative lecture, we recorded the blood pressure of the twenty-four patients next admitted to the sanatorium, taking the readings in each arm and working quite independently.

The conclusions drawn from this investigation were:

1. That there is no constant difference in readings taken in the two arms, which were equal in five cases.
2. That where difference occurred, the pressure in the right arm was usually higher than the left, although in two cases the position was reversed.
3. That the difference in readings between the two arms, where such existed, was of the same order of magnitude as the differences in readings in the same arm obtained by two observers working under similar conditions, that is, between 2 and 8 millimetres of mercury.
4. That such differences in pressures in the two arms as were recorded had no prognostic significance.

Yours, etc.,

D. B. ROSENTHAL.

H. M. L. MURRAY.

Gresswell Sanatorium,  
Mont Park,  
Victoria,  
December 16, 1935.

## X RAY TREATMENT OF ACNE.

SIR: It is quite clear that in Dr. Belisario's original paper a course of sixteen successive weekly quarter doses of X rays was held up as a legitimate procedure in the treatment of acne. I am pleased to note that Dr. Belisario has not, in effect, delivered such a series himself.

There are, however, certain aspects of Dr. Belisario's reply to my criticism which demand further comment from me.

In the third paragraph he states that he thinks that I must admit that one erythema dose of X rays over a large area like the face in a young individual is very much more likely to be followed by later sequelæ than eight quarter doses at weekly intervals. I am not prepared to subscribe to this doctrine. Therefore the argument Dr. Belisario builds upon this supposition falls to the ground. In the latter part of this paragraph and in several other places Dr. Belisario is obviously playing to the gallery. For example, when he leaves the readers to infer that I do not make allowance for the effect of secondary radiation produced when large areas are treated, he does so knowing very well that my measurements are by ionometer, which registers secondary as well as primary radiation. He knows, too, that I used this method long before he did, and that it was I who weaned him from the use of pastilles and showed him the advantage of ionometric measurement.

Dr. Belisario attempts to refute my explanation of why the basal layer of the epidermis must be more affected than the deeper-lying sebaceous glands. His attempt shows that he deliberately neglects the knowledge, or is unaware of the fact, that, for practical purposes, the sensitiveness of cells to radiation can be reckoned as proportional to their rate of multiplication. It is the cell in mitosis that is most vulnerable. If Dr. Belisario will prove that the rate of multiplication and the number of mitotic figures are greater in the cells of the sebaceous glands than in the basal layer of the epidermis, it might be possible to give some credence to his otherwise bald and unconvincing statement. Until then my original argument holds.

Dr. Belisario must learn to be more accurate in his statements, for when he says that he, with a few years' experience, has actually seen mild telangiectases on the faces of two patients each treated with one three-quarter dose of X rays, he lays himself open to very serious doubt.

He admits that he did not deliver the dose himself. Therefore his knowledge as to the actual magnitude of the dose was second-hand at best. The occurrence of such sequelæ is proof that the normal tolerated dose was surpassed. Dr. Belisario does not mention having seen these effects from four-fifth or full doses, which are given more often than three-quarter doses. He must therefore advance idiosyncrasy as an explanation of these two occurrences if his observations were correct. Such experiences have not come the way of others who have been far longer at this work than he has. I have not yet been able to convince myself that a true instance of idiosyncrasy to X radiation has come under my notice. Dr. Barclay, during his recent stay in Sydney, volunteered the same opinion. Dr. Belisario's experience in having seen two cases of idiosyncrasy is therefore the more remarkable.

Dr. Belisario's failure to achieve reasonable results with the treatment put forward by me in 1926 may be due to the fact that he has not explained carefully enough to the patient why and how the manipulative treatment is to be performed. The treatment has, of course, been varied somewhat since then, but the general principles are the same. Perhaps it is the workman and not the tool that is to blame. At any rate, many general practitioners, without the special knowledge on dermatological subjects possessed by Dr. Belisario, assure me that they can and do get good results by this treatment. Amongst others I may mention Dr. Sutherland, of Narromine, and Dr. McKeon, of Bundaberg. The latter, in a letter dated November 25, 1935, says with regard to this form of treatment: "Since that time I have used it frequently with excellent results. At the present time, when we are assailed on all sides by the reputed virtues of a multitude of preparations and modes of treatment, it is gratifying to alight on something that does produce results, and is a veritable oasis in a desert of despair and disillusion."

With reference to the authorities upheld by Dr. Belisario, he should know that McKee's book is now considerably out of date; that his methods of denoting the doses and qualities of the radiation he uses are very defective.

While not upholding Roxburgh (1934 edition) and McKenna (1933 edition) as authorities on X ray treatment, their books are two of the latest and best British publications on diseases of the skin. While their notation is inexact, nevertheless Dr. Belisario will find that they do not agree at all with him as to the total amount of radiation which is permissible in the treatment of acne.

Yours, etc.,

E. H. MOLESWORTH.

235, Macquarie Street,  
Sydney,  
December 17, 1935.

## ANTRAL INFECTION OF DENTAL ORIGIN.

SIR: I wish to draw attention to the ever-increasing number of dentists who treat cases of antral infection of dental origin by what seems to me entirely wrong methods.

I refer particularly to the performance of the so-called (dental) "radical antrum operation", which appears to consist in boring into the antrum from below to clean it out, but without making any provision for nasal drainage. Surely this must be wrong in principle for the following reasons:

The antrum is developed as an outgrowth from the middle meatus of the nasal cavity, and it has a permanent communication with the nose, but not with the mouth. The mucous membrane lining the antrum is continuous with that of the nasal cavity, and the cilia of the antral mucous membrane drain all mucus *et cetera* towards the antral ostium into the nose. It appears that the antrum has acquired power to deal with bacteria normally found in the nose more efficiently than it does with those inhabiting the mouth. Thus it can be seen that it is a physiological insult to "drain" the antrum into the mouth. Having accidentally or purposely opened into the antrum

through a tooth socket, it should be our object to shut off this communication with the mouth, with or without drainage into the nose.

Nowadays, in the ear, nose, and throat clinics, it is not uncommon to see examples of this type of antritis, which have been treated by a dentist either: (i) by syringing out the antrum through a tooth socket (sometimes for several weeks) without improvement, or (ii) by means of the dental "radical antrum operation", performed by the more ambitious dental surgeon, without making any provision for nasal drainage.

Cases of the first type no doubt sometimes clear up, but this, I maintain, is in spite of the treatment by way of the tooth socket. Presumably the lucky ones recover by virtue of the antrum's inherent power of ciliary drainage *per ostium naturale* into the nose. Syringing through the tooth socket merely causes reinfection and keeps the fistula open.

In my opinion correct treatment is antral puncture and lavage through the inferior meatus of the nose at two or three day intervals. If no improvement occurs after three or four punctures, do an intranasal antrostomy, because the antral mucous membrane has become so swollen that the natural opening is blocked. In most cases this will suffice, but if infection is gross or of long standing, it may be necessary to perform the Caldwell-Luc radical antrum operation, sometimes with gentle curettage of the dental fistula to promote closure. It is interesting to note how rapidly the patient is relieved of his pain and discharge once adequate drainage into the nose has been obtained.

Yours, etc.,

A. L. CLOWES, F.R.C.S. (Edin.).

141, Macquarie Street,  
Sydney,

December 20, 1935.

#### DOUBLE ECTOPIC PREGNANCY.

SIR: I should be glad if you would publish the following unusual case in your journal.

Joyce C., aged twenty years, married, consulted me on November 12, 1935, complaining of severe abdominal pain which commenced and settled down low on the right side. The pain then had been present about two hours and was getting easier. She had vomited once and her bowels had been functioning normally. She had no urinary upset. On inquiry I was told she had been married three years, had been pregnant once, and had a male child aged seventeen months. Her last menstruation had concluded one week previously and was normal in its incidence, having commenced on the twenty-eighth day, and also was of the usual duration, six days.

On examination I found her to have definite localized abdominal tenderness, without rigidity, low in the right iliac fossa about one inch above the centre of Poupart's ligament. There was neither tenderness nor rigidity over McBurney's point, and the abdomen was not abnormally full. Pelvic examination revealed tenderness but no mass in the right fornix and the cervix was not tender. I noticed after this examination some dark blood-stained discharge on my gloved fingers. I explained that she was suffering from inflammation of, or a possible pregnancy in, the right Fallopian tube, and I sent her to hospital for observation. Her condition subsided next day. She lost her pain and tenderness, and left hospital three days after admission. I saw her again on November 18 and 22 respectively, when she was apparently quite normal. However, in the evening of November 24 she returned with a recurrence of her right-sided pain much more severe than before. Pelvic examination now revealed a tender cervix and a small tender mass in the right fornix. I admitted her to hospital and submitted her to immediate operation.

At operation I found a lot of fresh blood immediately on opening the peritoneum. On removing this I discovered some old clot and a hemorrhaging early pregnancy in the right tube. I removed the right tube and ovary,

which was involved in the mass, cleared out as much blood as possible, removed the appendix, and closed the abdomen without drainage. I did not examine the left ovary and tube.

Her recovery was excellent until about the seventh day, when she suddenly developed a severe attack of pain in the left iliac fossa. She also then commenced to lose some bright blood *per vaginam*. This attack soon settled down, but the slight blood-stained vaginal discharge persisted. At intervals of two to three days she continued to get attacks of severe left-sided iliac pain lasting fifteen to twenty minutes. As these attacks, causing her to cry and sing out, appeared to synchronize with the visit of her husband, I was inclined to discount their severity and to regard them as possibly of an hysterical nature. She got up on the seventeenth and left hospital on the twenty-second day after operation. A pelvic examination before leaving hospital revealed what I tried to convince myself was an enlarged and possibly pregnant uterus. Excepting the persistent blood-stained vaginal discharge, no other abnormality was present. In the early hours of December 20, 1935—four days after leaving hospital—my patient was brought back with very severe pain in the left iliac fossa. I readmitted her to hospital and called my anaesthetist for her first operation into consultation. Pelvic examination on this occasion revealed a large mass apparently confluent with the uterus. There was no cervical tenderness, some slight tenderness in the left fornix, but no separate mass could be felt there. However, the left uterine artery was distinctly and easily palpable under the finger tips in the vagina. I decided, after some hours' observation, to operate on the following morning.

At this second operation was found a left-sided large ectopic pregnancy of about six or seven weeks' duration. It presented a large mass between the distended leaves of the left broad ligament and had pushed the uterus well over to the right side. By slow separation the mass was dissected out and removed. It was found to contain the pregnancy and left ovary, which was, unfortunately, hopelessly incorporated with it. There was no free blood, old or new, in the peritoneal cavity at the second operation.

I have concluded that this case was apparently a twin ectopic pregnancy involving both tubes. I understand that such a finding is extremely rare, and I would welcome comment on it from interested members.

Yours, etc.,

JOHN O'CONNOR, M.B., B.S.

Murwillumbah,  
New South Wales,  
December 23, 1935.

#### TREATMENT BY OLIVE OIL EMULSION.

SIR: In Dr. Fitzgerald's letter in THE MEDICAL JOURNAL OF AUSTRALIA of December 7 the personal tone, the apparent inability to distinguish between absorption and adsorption, and the preposterous "guarantee" are self-condemnatory. My only purpose in replying is to correct a number of subtle misrepresentations.

(1) The paper in the *Journal of Physiology* of July, 1933, gives an account of an apparatus for preparing fine emulsions and also describes some experiments which confirm the previously known fact that lipase acts more rapidly when the fats are more finely emulsified. It contains no data having any bearing upon the therapeutic value of olive oil emulsions.

(2) The experiments of Myers and of Frazer and Walsh prove quite satisfactorily that oil emulsions can neutralize the effects of toxins when the oil and toxin are mixed *in vitro*. They do not show that the emulsion can selectively adsorb or neutralize toxins *in vivo*.

(3) Although Professor Donnan is one of the world's most distinguished physical chemists, his opinion on a purely therapeutic matter is not necessarily authoritative.

(4) My very brief description of fat absorption from the bowel is based upon the one universally accepted by

physiologists. The work of Dr. Walsh merely adds some further detail and in no way conflicts with my statement.

(5) Although some of the fat in the chyle may be in the form of large globules, the greater part is in the form of very small globules, considerably less than one micron in size.

(6) The annotation in *The British Medical Journal* goes much further than Dr. Fitzgerald states. It is relevant to quote the two concluding sentences: "Unless the method is to be accepted on overwhelming clinical evidence and on an empirical basis, it is one which calls for experimental investigation by methods which do not appear yet to have been applied to it and (in as far as clinical employment is justified) for a careful study of its effect not only on fever and the duration of the disease, but on every aspect of the disease process—biochemical, cytological, or bacteriological. We would add that the present is a particularly unhappy time for claims to be made on behalf of methods of medical treatment which await full substantiation." I am in full agreement with these two sentences and would ask readers to note that the editorial authority also rejects the toxin adsorption hypothesis.

In conclusion, I regret that I shall be away from Australia for several weeks, so that any further contribution I may wish to make to this discussion must necessarily be deferred.

Yours, etc.,

F. WHITRIDGE DAVIES.

University of Sydney,  
Sydney.  
Undated.

#### AN INTERMEDIATE OPHTHALMIC SERVICE.

SIR: I am glad to be assured by Dr. W. M. C. MacDonald that the management of the Medical Eye Service of New South Wales endeavours to preserve the normal relationship between private patient and doctor unimpaired, and that freedom of choice on the part of both patient and doctor is promised. I see difficulties in giving effect to these essential principles of the service in connexion with an institute. This would be done immediately and always if the service were rendered by appointment at the rooms of the oculist, as Dr. Sawrey recommends in his letter in your issue of December 7.

Dr. MacDonald asks me if my suggestion, that an inadequate fee tends to less thorough service, applies to honorary work done at hospitals. I reply no. The reward for honorary service is entirely dissociated from pecuniary considerations and is of such a nature that it calls forth their best effort from leaders of the profession.

Any shortcomings chargeable to hospital practice arise from quite other causes, and chiefly from the impossible demands made upon an inadequate staff by the overcrowded out-patient departments of the public hospitals.

Yours, etc.,

EDWARD L. GAULT.

2, Collins Street,  
Melbourne, C.I.  
Undated.

#### Obituary.

##### JOHNSTONE SIMON THWAITES.

DR. JOHNSTONE SIMON THWAITES, whose death was recorded recently in these pages, was the son of the late James Thwaites, of Victoria, grazier. He was born in 1865 and went to school at the Hamilton Academy and the Hawthorn Grammar School. He became an undergraduate in the Faculty of Medicine at the University of Melbourne in 1882 and graduated as Bachelor of Medicine and Bachelor of Surgery in 1887. He was a prominent playing member of the University Football Club, which in those

days played in Melbourne first grade football. He was also a member of the University first eleven.

After graduation Thwaites commenced practice at Tallangatta, in the Upper Murray district of Victoria, and was the first resident medical practitioner in that large district extending from Tallangatta to Corryong. It was while he was here that he became one of the best field and pigeon shots in Victoria. He was a back mark man in open pigeon matches in Melbourne and elsewhere. He was also interested in racing and owned some well known steeplechase horses, and his horses, particularly round the north-eastern district of Victoria, won a number of races.

After living at Tallangatta for some years he practised for a short period at Port Arlington, then at Tungamah, then at Woodend, and then went to Mansfield, Victoria, where he resided for many years. He was the medical superintendent of the Mansfield District Hospital. When he left Mansfield he purchased Dr. Kitchen's practice at South Melbourne, which he held for some years. Later he went into partnership with Dr. Chas. Perry at 537, Malvern Road, Toorak; he held this practice with several partners. He was a leading member of the University Club, Melbourne, was a keen billiard player, and a fine all-round sportsman. He was thorough in his work, was loved by his patients, and has left a record of good service and good citizenship, and a memory which is valued by hundreds of friends in all walks of life.

#### WILLIAM GEORGE HERBERT TREGEAR.

WE regret to announce the death of Dr. William George Herbert Tregear, which occurred on December 15, 1935, at Melbourne, Victoria.

#### WALTER LESLIE DAVIES.

WE regret to announce the death of Dr. Walter Leslie Davies, which occurred on December 31, 1935, at Penshurst, New South Wales.

#### University Intelligence.

##### THE UNIVERSITY OF MELBOURNE.

THE Registrar of the University of Melbourne writes that the Randal and Louisa Alcock Scholarship and the Alwyn Stewart Scholarship are available for medical research in the University of Melbourne. They are open to candidates who have obtained honours in the final honour M.B., B.S. examinations, and may be held in conjunction with other awards made by the Medical Research Committee. Applications should be in the hands of the Registrar not later than the first week in January, 1936.

#### Analytical Department.

##### "HERMESETAS."

"HERMESETAS" is stated by the manufacturers to be an ideal substitute for sugar. They state that it is prepared from pure crystallized saccharin without the addition of sodium bicarbonate or other substances.

A sample has been submitted to analysis by our analysts. According to the British Pharmacopœia, soluble saccharin should pass certain tests. "Hermesetas" passes each of these tests as follow:

1. The aqueous solution is slightly acid to litmus.
2. Benzoates and salicylates are absent.



3. The melting point of the crystalline precipitate produced by the addition of hydrochloric acid to the aqueous solution is 228° C. (The requirement is not less than 226° C.)

4. The limit of *p*-sulphamino-benzoic acid is not exceeded. The tablets consist of soluble saccharin alone and do not contain an excess of sodium carbonate. "Hermesetas" may be recommended as a reliable form of saccharin.

### Honours.

#### NEW YEAR HONOURS.

HIS MAJESTY THE KING has been pleased to confer the following honours on medical practitioners.

Dr. Hugh Berchmans Devine, of Melbourne, has been created a knight.

Dr. Arthur Murray Cudmore, of Adelaide, has been created a Commander of the Most Distinguished Order of Saint Michael and Saint George.

The congratulations of the medical profession are extended to Sir Hugh Devine and Dr. Cudmore.

### Books Received.

LEAGUE OF NATIONS: QUARTERLY BULLETIN OF THE HEALTH ORGANISATION; September, 1935. Geneva: The Publications Department of the League of Nations. Price: 2s. 6d. net.

A PRACTICAL HANDBOOK OF MIDWIFERY AND GYNÆCOLOGY FOR STUDENTS AND PRACTITIONERS, by W. F. T. Haultain, B.A., M.B., B.Ch., F.R.C.S.E., M.R.C.P.E., F.C.O.G., and C. Kennedy, M.B., Ch.B., F.R.C.S.E., M.C.O.G.; Second Edition; 1935. Edinburgh: E. and S. Livingstone. Demy 8vo, pp. 366, with illustrations.

### Medical Appointments.

Dr. R. G. Ch. de Crespigny has been appointed Honorary Assistant Physician to the Mareeba Babies' Hospital, South Australia.

Dr. J. J. Donnellan has been appointed Medical Officer, Medical Branch, Department of Public Instruction, New South Wales.

Dr. C. Fortune has been appointed Medical Officer of Health by the Guildford Municipal Council, Western Australia.

### Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser", pages xvi-xviii.

CHILDREN'S HOSPITAL, CARLTON, VICTORIA: Resident Registrar, Assistant Resident Medical Officers.

FREMANTLE HOSPITAL, FREMANTLE, WESTERN AUSTRALIA: Junior Resident Medical Officer.

ROYAL SOUTH SYDNEY HOSPITAL, SYDNEY, NEW SOUTH WALES: Resident Medical Officer.

THE BRISBANE AND SOUTH COAST HOSPITALS BOARD, QUEENSLAND: Honorary Officers.

THE UNIVERSITY OF QUEENSLAND, BRISBANE, QUEENSLAND: Professorship of Anatomy, Professorship of Physiology, Lectureship in Physiology.

THE WOMEN'S HOSPITAL, CROWN STREET, SYDNEY, NEW SOUTH WALES: Honorary Clinical Assistant.

ZEEHAN AND MONTAGU MEDICAL UNIONS, ROSEBURY, TASMANIA: Medical Officers.

### Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCHES.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 135, Macquarie Street, Sydney.	Australian Natives' Association. Ashfield and District United Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham United Friendly Societies' Dispensary. Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney. North Sydney Friendly Societies' Dispensary Limited. People's Prudential Assurance Company Limited. Phoenix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association, Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Brisbane Associate Friendly Societies' Medical Institute. Chillagoe Hospital. Richmond District Hospital, North Queensland. Members accepting LODGE appointment and those desiring to accept appointments to any COUNTRY Hospital, are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Lodge appointments in South Australia. All Contract Practice Appointments in South Australia.
WESTERN AUSTRALIAN: Honorary Secretary, 205, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (Wellington Division): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

### Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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